LIBRARY
OF THE
Charing Cross Hospital Medical School.

Case XX Y
Shelf X 5
No. 18

SHL
WITHDRAWN

THE

RETROSPECT

OF

PRACTICAL MEDICINE AND SURGERY,

BEING A

HALF-YEARLY JOURNAL,

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN THE MEDICAL SCIENCES.

EDITED BY

W. BRAITHWAITE,

SURGEON TO THE LEEDS GENERAL EYE AND EAR INFIRMARY; AND LECTURER ON MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN, IN THE LEEDS SCHOOL OF MEDICINE.

ROYAL HOSPITAL, COLLEGE OF MEDICINE
LIBRARY.
CHARING CROSS

VOL. IX. JANUARY—JUNE.

1844.

LONDON:

SIMPKIN, MARSHALL, AND CO.,

EDINBURGH: OLIVER AND BOYD. DUBLIN: HODGES AND SMITH.

MDCCCXLIV.

[BOLLAND AND KEMPLAY, PRINTERS, INTELLIGENCER OFFICE, LEEDS.]

At the end of the present volume the reader will find a very useful *General Index* to all the previous eight volumes of this "Retrospect," which, with the index to this, the 9th volume, will enable him in a moment to ascertain the most recent information on any practical subject, which may have been published in any of the Medical Journals since 1840. This *General Index*, however, will only point out *diseases* and *medicines*. For example, a practitioner is in attendance on a case of *Consumption*, and he wishes to know all the most recent suggestions for its treatment. By referring to this *General Index* he will be able, at one view, to see what different writers in the Medical Journals have said on the subject, during the last four years. He will find, for example, a reference to the different papers, in which are recommended *sea salt*, the *inhalation of conium and iodine*, *feeding on ferruginous bread*, the *influence of a malarious atmosphere*, *emetics*, *iodine*, *mercury*, *naphtha*, &c., &c., and on most other practical subjects he will find a reference to some useful suggestions and improvements. He will be thus saved the trouble of referring to the numerous volumes, both of this work and of the rest of the Medical Journals which have been published; as in this will be contained a bird's-eye view of the whole.

Park Square, Leeds,
June, 1844.

CONTENTS OF VOL. IX.

PRACTICAL MEDICINE.

ARTICLE.	AUTHOR.	PAGE.
1. On the Diagnosis of Empyema	*R.L.MacDonnell,Esq*	1
2. Remarks on Urinary Disease	*Dr. John Aldridge*	8
Relations of Sugar and Albumen	*Ditto*	9
History of Lithic Acid Calculi	*Ditto*	11
3. On Albuminuria	*Dr. Heaton*	13
4. Effects of Re-agents upon Urinary Deposits	*Dr. Griffith*	15
Ditto	*Dr. Christison*	17
5. On the Respective Value of the Tests for Diabetic Urine	*Dr. Golding Bird*	21
Hünefield's Test	- - -	22
Runge's Test	- - -	23
Trommer's Test	- - -	23
Test of Fermentation	- - -	24
Test afforded by the Growth of Torula	- - -	25
6. On Large Doses of Nitrate of Potash in Rheumatism	*Dr. H. Bennet*	26
7. On the Comparative Value of the Different Preparations of Mercury and Iodine, and the Best Modes of Administering them	*Dr. E. O. Hocken*	28
Chloride	- - -	28
Bichloride	- - -	28
Pilula Hydrargyri	- - -	28
Proto-ioduret	- - -	29
Inunction	- - -	29
Fumigation	- - -	29
Topical Applications	- - -	30
Iodine	- - -	31
Review of the Comparative Value of Mercury and Iodine in the Treatment of Syphilis	- - -	34

ARTICLE.	AUTHOR.	PAGE.
8. On Intermittent Disease	*Dr. Mayo*	34
9. Treatment of Asphyxia from Hanging	*Dr. Shearman*	38
Ditto	*Mr. Bree*	40
10. On the Use of Naphtha in Phthisis	*D. Wilson, Esq.*	41
Ditto	*Dr. Hastings*	42
On the Use of Naphtha in Bronchial Affections	*Mr. Proctor*	46
11. On Tic Doloureux	*Sir Charles Bell*	46
Ditto	*Dr. Watson*	47
Ditto	*M. Ducros*	47
Ditto	*Dr. Henry Hunt*	48
12. On Impending Dissolution in Young Infants	*Dr. Doherty.*	49
13. On the Diagnosis in Cases of Paralysis of the Face	*Dr. M. Hall.*	56
14. On the Dietetic and Medicinal Treatment of Gout and Rheumatism	*Dr. R. B. Todd.*	59
Treatment of the Paroxysm of Gout.	*Ditto*	61
Rules for the Use of Colchicum in Gout	*Ditto*	61
On the Rheumatic Diathesis	*Ditto*	62
General Treatment of Rheumatic Fever	*Ditto*	63
The Heart Affection.—Its Treatment by Mercury, &c.	*Ditto*	65
15. Arguments against Liebig's Theory of Gout	*Ditto*	66
16. On Pain of the Loins	*Dr. Oke*	69
17. On the Hydropathic Treatment	*Editor of Lancet.*	71
18. On the Use of Cod's Liver Oil in Strumous Diseases	*W. O. Chalk, Esq.*	75
19. On Arsenic as a Poison; its Tests and Antidotes	*Dr. Shearman.*	76
20. Treatment of Articular Rheumatism; by Colchicum, Nitre, and Bloodletting	*Dr. E. Monneret*	79
Bloodletting	- - -	81
Nitre	- - -	81
21. Inflammation and Gangrene of the Lungs produced by Partial Asphyxia	*Dr. Heaton.*	82
22. On the Use of Iodide of Potassium	*Dr. W. S. Oke*	84
Phagedænic Ulceration	*Ditto*	84
Periosteal Disease.	*Ditto*	85
23. On Ergot of Rye in Retention of Urine	*Dr. Ross*	87
Ditto	*Dr. Houston*	89
Ditto	*Dr. Hargreave*	90
Ditto	*Dr. O'Beirne*	90
On Ergotine	*M. Bonjean*	91
Ditto	*Dr. Russell*	91
24. Use of Digitalis in Mania and Epilepsy	*Dr. Sharkey*	92
Ditto	*Dr. Scott*	93
25. On Ischuria Renalis	*Dr. T. Thompson*	93
26. The Use of Cochineal in Hooping Cough	*Dr. Cajetan Wachtl*	94
Ditto	*Dr. Allnatt*	94
27. Effects of Starvation on the Size of the Heart	*Dr. Chossat*	95

ARTICLE.	AUTHOR.	PAGE.
28. On Contagion	*Dr. T. Thompson*	96
Ditto	*Dr. G. Bird*	97
Ditto	*Dr. Heaton*	97
29. Effects of Camphor	*M. Raspail*	97
30. Antidotes	*MM. Bouchardat & Sandras*	98
31. On the Unalterable Fulness of the Vascular System of the Brain	*Dr. Watson*	99
32. Treatment of Delirium Tremens	*Dr. Watson*	100
33. Oleum Santonicæ, or Chenopodii, as an Anthelmintic	*Dr. Monsarret*	101
34. Selection from the Formulary of Biett on Diseases of the Skin	*Dr. Burgess*	102
35. Belladonna in painful Menstruation, &c.	*Dr. G. Bird*	104
36. Copaiva Sugar-Plums	- - -	105
37. On Bloodletting	*Dr. Williams*	105
38. New Researches on the Urine in a state of Health and Disease	*M. Lehmann*	105
39. Use of Musk in certain Cases of Delirium	*M. Recamier*	107
Ditto	*Dr. Roche*	107
40. Electricity in Poisoning by Laudanum	*Mr. Corfe*	108
41. On the Antidotes of Corrosive Sublimate, Copper, Lead, and Arsenic	*MM. Bouchardat & Sandras*	108
42. The Hæmospasic Method of Treatment	*M. Junod*	109
43. Tobacco taken moderately, &c.	*M. Raspail*	112
44. Infrequency of Phthisis in Marshy Countries	*M. Nepple*	113
45. On Blistering by Nettles in Measles	*M. Trousseau*	114
46. On the Action of different Medicines on the Mental Faculties	*Professor Otto*	114
47. Incontinence of Urine and Enuresis cured by Electricity	*M. Froriep*	115
48. Electricity in poisoning by Strychnine	*M. Ducros*	116
49. Acetous Extract of Cantharides	*M. Soubeiran*	116
50. Prepared Sevum	- - -	116
51. Therapeutic properties of the Chloride of Silver	*Dr. Perry*	117
52. Treatment of Sciatica by Irritation of the Foot	*M. Caffe*	117
53. Paraplegia Cured by Strychnine	- - -	118
54. Treatment of Sciatica	*M. Fioravante*	118
55. Effect of the Anisodus Luridus on the Pupil	- - -	119
56. Devergie's Solution of Arsenic	*M. Devergie*	119
57. Muriate of Ammonia Internally	*Sir G. Lefevre*	120
58. The Sea Side as a Remedial Agent	*M. Guastalla*	120
59. On the Valerianate of Zinc	- - -	122
60. Veratria Ointment and Acetate of Veratria	- - -	123
61. Effect of Electro-Magnetism on Paralysis	*Dr. Shearman*	123
62. On Scarification of the Gums during Dentition	*Dr. M. Hall*	125
63. On the use of Digitalis in certain Diseases of the Heart	*Dr. Henderson*	126
64. On Benzoin Water	- - -	128

SURGERY

ARTICLE.	AUTHOR.	PAGE.
65. On some of the most important subjects in the late Lectures of Sir B. Brodie.	*Sir B. Brodie*	129
Polypus of the Nose	*Ditto*	129
Diseases of the Tongue	*Ditto*	135
Paralysis	*Ditto*	138
Fistula in Ano	*Ditto*	140
On the use of Mercury in Syphilis	*Ditto*	153
On Scirrhus of the Female Breast	*Ditto*	156
Mode of taking out a Fatty or Steatomatous Tumour from the Breast	*Ditto*	161
66. Remarks on the Treatment of Vesico Vaginal Fistula	*Dr. Keith*	164
67. On the Treatment of Entropium and Trichiasis	*W. R. Wilde, Esq.*	165
68. On Conical Cornea	*Dr. Pickford*	174
69. On Excision of the Superficial Layers of an Opaque Cornea	*Dr. Hamilton*	180
Ditto	*Dr. Gultz*	180
70. On the Lateral Operation of Lithotomy	*Dr. Keith*	185
71. Aneurism Treated by Compression	*R. Liston, Esq.*	195
72. On Aneurism of the External Iliac Artery	*Richd. Hey, Esq.*	197
73. On the Treatment of Lateral Curvatures of the Spine	*Dr. M. Hall*	199
Ditto	*Dr. Little*	202
Ditto	*— Stafford, Esq.*	205
74. On the Treatment required after the Spontaneous Introduction of Air into the Veins	*J. E. Erichsen, Esq.*	206
75. On Tracheotomy	*Dr. J. A. Wilson*	213
76. On the Treatment of Fistula Lachrymalis by Dilatation	*Dr. Parrish*	215
77. On the Nature and Treatment of Piles	*M. Lisfranc*	217
78. New Instrument for Crushing Calculi in the Bladder	*Mr. Simpson*	218
79. On Discharges from the Ears	*W. R. Wilde, Esq.*	220
80. On the Treatment of Stricture	*B. Phillips, Esq.*	227
81. Effects of Chloride of Zinc, and Chloride of Lead in Cancer	*E. W. Tuson, Esq.*	233
82. Treatment of Scalp Disease	- - -	239
83. On the best position in Fractures of the Forearm	*Dr. Chadwick*	239
Ditto	*T. O'Connor, Esq.*	240
84. Case of Spina Bifida successfully Treated by repeated Punctures	*Dr. Stevens*	240
85. On the Arch-tourniquet	*Dr. Oke*	241
86. Excision of Internal Piles	*Mr. Druitt*	242
87. On Aneurism of the Aorta	*Dr. Law*	242

ARTICLE.	AUTHOR.	PAGE.
88. Case of a Needle entering the right Breast, and finally lodging in the Heart	- - -	244
89. Suggestions for the Improvement of the Rhinoplastic Operation	*Dr. Keith*	244
90. On Prussic Acid in Opacity of the Cornea	*G. K. W. Patersone, Esq.*	246
91. Cyanide of Zinc in Ulcers and Opacities of the Cornea	*M. Carrier*	247
92. Hæmorrhage after Amputation	*Mr. Jesse*	247
93. Chloride of Zinc in Toothache	*Dr. Staneili*	247
94. On the Cure of Nævi by Croton Oil	*M. Lafarque*	247
95. On Scrofulous Diseases of the Testis	*Mr. Curling*	248
96. Treatment of Mercurial Sore Mouth	*Dr. Watson*	249
97. Prevention of the Contagion of Syphilis	*Dr. Pfeffer*	250
98. Tracheotomy in the last stage of Croup	*M. Scoutetten*	250
99. Treatment of Erectile Tumours of the Eye-lids	*M. Carron du Villards*	251
100. On Extraction of Foreign Bodies from the Ear	*C. Clendon, Esq.*	251
101. Artificial Pupil made in the superior Eyelid	*M. Gerold*	252
102. Diagnosis of Fractures of the lower end of the Radius	*E. F. Lonsdale, Esq.*	252
103. On Gangrene of the Face	*H. Obre, Esq.*	253
104. Opium in Hernia	*J. M. Walker, Esq.*	256
105. On the Treatment of Cartilaginous Bodies in Joints	*R. Liston, Esq.*	256
106. Caustic Vienna Paste	- - -	257
107. Treatment of Hernia Humoralis or Gonorrheal Orchitis by Opium	*Mr. Gray*	257
108. On the Operation for Hare-lip	*W. Fergusson, Esq.*	257
109. Use of Acupuncture for the Consolidation of Fracture	*M. Wiesel*	258
110. Method of causing immediate Vesication	*M. Deaucq*	258
111. On the Removal of Uterine Polypi	*Dr. Quackenbush*	258
112. Treatment of Bunion	*Mr. Humpage*	259
113. Treatment of Gangrenous Intestine in Hernia	*Dr. Paul*	259
114. New Truss for Hernia	*Mr. F. L'Estrange*	260
115. The Liquor Potassæ	- - -	261
116. On Wounds of the Intestines	*M. M. Boutard*	261
117. Treatment of Chancre and Bubo	*M. Ricord*	262
118. Treatment of Bubo	*Malapert & Reynaud*	264
Treatment of the Acute Period	*Ditto*	264
Indolent Bubo	*Ditto*	264
Suppurated Bubo	*Ditto*	265
119. Mode of Forcing out Collections of Matter from Bony Cavities by Atmospheric Pressure	*Dr. Buchanan*	265
120. Useful Hint on the Treatment of Chronic Rheumatism and Neuralgia	*Dr. Jas. Johnson*	266
121. Pommade for Chaps and Fissures of the Toes	- - -	266
122. Anodyne Pommade	- - -	266

MIDWIFERY.

ARTICLE.	AUTHOR.	PAGE.
123. Effects of Ergot of Rye on the Fœtus in Utero	*Dr. Beatty*	267
Ditto	*Mr. Wright*	268
124. On Puerperal Fever	*R. Storrs, Esq.*	269
Ditto	*Mr. Reedal*	269
Ditto	*Mr. Elkington*	271
125. On Extirpation of Diseased Ovaria	*Ed. of the Lancet*	271
Ditto	*Dr. Cormack*	276
Ditto	*S. Crompton, Esq.*	277
126. On the Dark Abdominal Line extending between the Pubes and Umbilicus after Delivery	*Dr. Cormack*	278
Ditto	*Dr. Montgomery*	278
127. On Sterility	*Dr. M. Hall*	280
128. Tartar Emetic in Tardy Labour	*Dr. Gilbert*	281
129. Obstetrical Properties of Powder of Colchicum	*M. Metta*	282
130. Singular Case of Pregnancy	*M. Perfetti*	282
131. Ovarian Dropsy treated with Ioduret of Iron	*S. Tutin, Esq.*	282

RETROSPECT.

PRACTICAL MEDICINE.

&c., &c.

Art. 1.—ON THE DIAGNOSIS OF EMPYEMA.

By Robert L. Mac Donnell, Esq., Demonstrator of Anatomy in the Medical School, Park Street, Dublin, &c.

[We hardly need remind our readers that when serum is effused into the cavity of the pleura the affection is named *hydrothorax*, when the effusion consists of blood it is called *hæmothorax*, when the effusion is of a gaseous nature, *pneumothorax*, and when constituted of pus and other kinds of effusion, we have what is called *empyema*, especially when the liquid compresses the lung and impedes respiration. Mr. Mac Donnell has written a most interesting paper on the last named affection, in which he relates several cases wherein one or more tumours appeared on the surface of the chest, which after *pulsating* for some time, became red, tense, and shining, and eventually burst, giving exit to large quantities of pus. When the empyema is attended with these pulsating tumours he calls it "*Pulsating Empyema of Necessity.*" The following is a good illustration.]

A woman, aged 28, of dissolute and abandoned habits, was admitted into the Meath Hospital, Sept. 6. It appeared from her statement that she had been labouring under symptoms of acute pleuritis for two months, for which she was actively treated. When admitted she was greatly emaciated, suffered from pain in the left side a little below the mamma ; she had cough, with bloody streaks through the expectoration, and inability of lying on either side, decubitus being for the most part on the back. Her pulse was 108, small and weak. The *physical signs* were dulness of the left side, commencing a few inches below the clavicle, and extending downwards both before and behind ; the left lateral region was likewise dull ; total absence of respiration all over this dull portion ; the upper part of the left side, both before and behind, was clear on percussion, with bronchitic rales accompanying the respiratory murmur. The lower half of the sternal region was completely dull, and here

the sounds and pulsations of the heart were more intense than in any other situation. The whole of the right side of the chest, both before and behind, sounded clear, and the respiratory murmur was loud, puerile, and free from rale. There was no dilatation of the side observed on her admission.

For the next fortnight there was very little change observed ; on the 21st, however, the cough again became very troublesome, and was accompanied by a copious muco-purulent expectoration, and her breath became intolerably fœtid ; pulse 106, weak and feeble ; respiration 25, and very laboured. She complained of slight tenderness a little below the nipple, but there was no discoloration or œdema of the part. On the 26th a small tumour became perceptible, *every time she coughed*, in the situation of the pain ; it was soft, and exquisitely tender to the touch, but not discoloured or œdematous. On the 28th, bronchitic rales were very intense in the right lung, and those in the top of the left lung were much increased ; the *expectoration had become quite purulent*. When she reclined to the left side the tumour became greatly enlarged, but receded when she lay on the right, and had a distinct fluctuation. On the 30th the tumour had extended considerably, and the expectoration was still *purulent, and very copious*. Pulse 108, and weak.

From the 1st of October till the 15th, she suffered severely from incontrollable diarrhœa, and was reduced to such a state that her stools were passed involuntarily. The tumour had greatly increased, and was now about the size of an orange, it was red, shining, and fluctuating, *and had a strong diastolic pulsation*, which did not convey the idea of being tilted forward by a pulsating body, as occurs in the case of tumours lying on arteries ; but it was of an expanding character, and in every part the pulsation was equally strong. *Though frequently examined with the stethoscope the least trace of bruit de soufflet was never discovered ;* nor had it the peculiar thrill so frequently felt in aneurisms. On the 21st she expectorated about a pint of green pus, and the bowel complaint received a notable check. The tumour was still more red, tense, and pulsating, and on the following day it burst, and gave exit to about three quarts of extremely fœtid pus, and she became exceedingly weak. After the evacuation of the pus the sound on percussion assumed a clear tone. On the 24th the respiration in the right lung was again healthy, and free from rale. The tumour had receded, the respiration in the affected side was just audible, but without rale. All the metallic phenomena, except *tinkling* and amphoric breathing, were present, and the sound on percussion was quite tympanitic. When the aperture was uncovered *a peculiar rustling or whistling noise was perceived at each inspiration. From this time she began to rally, her strength increased, the diarrhœa ceased, and the purulent expectoration diminished*, and she was able to sit up all day, the pus constantly trickling from the fistula which remained open, and for the next six weeks she had periodical discharges to the amount of two or three quarts every ten days or so. At last her strength again failed, the

cough increased, the pulse became quick, but she remained free from sweating. The clavicle and spine of the scapula of the affected side became gradually dull, accompanied with feeble respiration, mixed with crepitating rales. The day before her death, which occurred on the 15th of December, a discharge of nearly three quarts of green and fœtid pus escaped from the fistula.

Post Mortem Examination.—The right lung was in every respect healthy, *not the least evidence of bronchial inflammation in any part of it.* On the left side of the chest being opened, the lung was found bound by adhesions to the ribs, for about two-thirds of the pleural cavity, and the remaining third, *i. e.* between the compressed and shrivelled lung and diaphragm, was an empty cavity. The lung was also bound down to the spinal column by two strong bands of adhesion, and its inferior lobe was found red and carnified. The sac of the abscess passed behind the lung also, to a considerable distance ; it was coated with a thin layer of organised lymph. The upper lobe of the left lung was the seat of numerous turbercles, beginning to soften, the anterior part of the lower lobe was healthy, but the posterior, as before stated, was solid. The fourth rib was quite carious near its cartilage, and the sixth was in a similar condition, and the periosteum covering both was in a sloughy state. Externally the integuments around the fistula were separated for a couple of inches from the subjacent muscles. *The liver was enlarged to nearly half its normal size, engoryed and full of blood.* The intestines were examined with the greatest care, but no trace of disease could be discovered.

[In the next case related by Mr. Mac Donnell, two tumours appeared in the lower part of the left side, presenting fluctuation and *pulsation*, which, on being opened, gave exit to large quantities of pus : one tumour was situated in the spot usually occupied by the apex of the heart ; the other posteriorly between the tenth and eleventh ribs, about two inches from the spine. They were each about the size of a Seville orange, were soft, fluctuating, not discoloured at first, and possessed a *strong diastolic pulsation*, quite visible and as strong as that of an aneurism of equal size, but without *bruit de soufflet* or thrill. It was also evident that a communication existed between them, for by placing the hand on one, fluctuation could be felt when the other was tapped. The heart had left its natural position (now occupied by one of the tumours,) and was pulsating strongly and visibly to the right of the sternum, under the corresponding mamma. Both tumours were opened at different times to the great relief of the patient, who however eventually died of phthisis, after a residence of four months in a prison. In the third case related, "*two tumours*, each *about the size of a hen-egg, were observed*, one occupying a situation a few inches below the nipple, the other presented itself between the tenth and eleventh ribs about two inches from the spinal column. *They were rather tender to the touch, a few turgid veins surrounded their bases, the integument covering them was discoloured and reddish, and they both*

possessed a well marked fluctuation and a distinct, perceptible, and diastolic pulsation. This latter peculiarity was not only evident to the touch, but quite perceptible to the eye ; and as was noted in the two former cases, these tumours were completely devoid of thrill, or *bruit de soufflet*, and the pulsation had all the characters that were observed in the two others." An opening was made into the posterior tumour, and a large quantity of odourless pus was discharged ; the entire amount was not, however, drawn off, and the wound was closed with adhesive plaster, and soon united. When next examined, the tumour was found as large as before, and again presented the *pulsation* as well marked as ever. From the operation he experienced great relief for a few days, but again the urgent symptoms obliged Mr. Morrison, his regular attendant, to make a second opening, and as soon as the matter began to flow he got ease from the sense of suffocation. For a little while the patient appeared to improve, but he soon fell a victim to distressing hectic."]

Remarks.—The three preceding cases are no less interesting than important, and, as far as I have been able to ascertain, are perfectly new in the history of empyema, there being no mention made of such cases in any of the recent writings on the disease. It is worthy of notice that in all three, large tumours presented themselves in the situation usually occupied by the heart's apex, and in all, the heart itself was dislocated to the right of the sternum ; there cannot then be the least doubt as to the source from which the pulsation was derived, and the manner in which it was communicated to these abscesses. The heart, pushed out of its normal position, pulsated strongly and equally against their walls, and their contents being fluid and of equal density, a uniform and diastolic impulse was communicated to all parts of their surface, more intense, of course, in those situations nearest the source of pulsation. This accounts for what was noticed in the three cases, that the pulsation did not resemble that so often observed in tumours lying over large arteries, in which the motion consists in a mere tilting forward, nor was it like that which is seen in ordinary abscesses lying on an artery, in which the pulsation occurs, generally speaking, along the line of the vessel, and is scarcely perceptible in any other part of the tumour ; but it was uniform, expanding, and strong. In the two last cases, the tumours behind either derived their pulsation from the heart or from the thoracic aorta, and were from their size, situation, and feeble pulsation, more likely to lead us into error than those in front. What are the affections with which these cases might have been confounded by a person ignorant of the actual state of our knowledge respecting thoracic disease, or who, unacquainted with their history, had only seen them for the first time ? Thoracic aneurism, and pulsating cancer of the lungs immediately present themselves to our view, and on examination we shall find that they possess some features in common. When compared with aneurisms we have, in both cases, tumours occurring in patients, who for a length of time complained of pain in the side,

difficulty of breathing, cough, inability to lie but on one side ; whose constitutions were exhausted by the protracted and distressing nature of their complaints, and in whom the outward progress of the disease was marked by severe pain at a particular point, in which, after a time, a small tumour, of a soft and yielding nature, is observed, which gradually increases in size, is totally devoid of pain, and presents well marked *diastolic pulsation*. But, on the other hand, the history of the last two cases was that of pleurisy with effusion ; their duration also (three years) was greater than the average length of time that patients with thoracic aneurisms lived, and at no period did they experience those dreadful, tearing, and lancinating pains peculiar to the latter disease ; and, in addition, many of the usual symptoms of the affection were absent, such as dysphagia, *the peculiar aneurismal cough*, a *bruit de soufflet* on placing the stethoscope over the tumour, and a thrill sensible to the hand ; and as far as I have been able to ascertain, aneurism of the thoracic aorta has never presented itself externally in two situations so *widely separated*. They were also distinguished from aneurism in the following particulars : the greater portion of the affected side was dull, and without respiratory murmur, yet the pulsation was *only* felt in the external tumours, in this respect differing essentially from aneurisms, in which the pulsation, thrill, and *bruit de soufflet* (when present) *are most intense at the point of maximum dulness ;* and though by pressure on a bronchial tube, aneurisms may prevent the entrance of air into the part of the lung to which the tube leads, and thus produce absence of murmur, yet this portion of lung will yield a clear sound on percussion, thus presenting phenomena altogether different from those observed in my cases.

These cases, however, establish the fact, that "empyema of necessity" is liable to be mistaken for aneurism, particularly (as in the first case) when it occurs in the form of *one large pulsating tumour*, and an accurate knowledge of the characteristic features of the two affections is necessary, in order to avoid committing the grievous error of pronouncing an empyema to be an aneurism, or *vice versa*. But we do not anticipate so much difficulty in distinguishing between these two diseases as between such cases as I have detailed, and "cancer of the lung and mediastinum." At the very outset of our investigation a great difficulty presents itself, for we cannot avail ourselves of the aid derived from the history of the disease, for in many of the most accurately recorded instances of cancer of the lung, the patients evidently suffered at the commencement of their illness *from pleurisy excited by ordinary causes, and followed by empyema*, and in other instances where the existence of empyema was not actually discovered, the history of the cases resembled in many particulars that of ordinary pleurisy.

[Mr. Mac Donnell next relates two interesting cases of empyema in which the pus made its way, not externally, but into one or more of the bronchial tubes, and was removed by expectoration. The first case commenced with acute pleuritis, followed by *copious puru-*

lent expectoration, two large sputa-cups full of thick, yellow, "well concocted" pus being expectorated daily. The entire of the empyema was thus removed by expectoration, and in six weeks the patient quite recovered. Professor Greene in the 17th vol. of the Dublin Journal, has drawn the attention of the profession to some cases of this kind.] "He details the particulars of four cases of the disease, in all of which copious *purulent* expectoration was a prominent symptom; and in all there were external tumours, which it was deemed prudent to puncture. In these instances, it was observed that as soon as the matter got exit by the external opening, the quantity of *purulent* expectoration diminished, and the same circumstance occurred in the case now mentioned. Dr. Greene adds—'The first explanation I heard offered as to the nature and cause of this expectoration, was suggested by Dr. Hutton, in a consultation held on one of the cases detailed. He observed, that he had frequently seen the expectoration to subside and lose its character when an opening had been made for the collection, and had consequently come to the conclusion, that in many cases of empyema, the expectoration was the result of an effort of nature to free the system of purulent deposit through an external outlet, which in these instances was effected through the bronchial tubes.'

The paper of Dr. Greene must be regarded by every physician as one of the most useful that has appeared for many years. We learn from it that though a patient present all the symptoms of extensive empyema of one side, with bronchitic rales or gurgling in the opposite lung, and copious *purulent* expectoration, the case is not to be despaired of, nor are we justified in giving a positive diagnosis of the existence of pulmonary abscess.

Before the appearance of Dr. Greene's paper, these cases would have been considered as hopeless examples of pulmonary abscesses, or at least of empyemas bursting into a bronchial tube. This leads me to make a few remarks, suggested by the close observation of some cases of empyema, which have terminated by purulent discharges from the bronchial tubes. There are two modes by which this process is effected; in one, the membrane *takes on a vicarious action*, by which large quantities of pus are discharged *without any distinct evidence of inflammation being set up in the membrane, or communication being established between the bronchial tubes and the sac of the abscess.* In the other form, a *direct* communication exists between the bronchial tube and the sac of the empyema. They are both efforts of nature to get rid of the purulent collection and effect a spontaneous cure, but as the means adopted are so widely different, an equally opposite train of symptoms may naturally be expected to attend these processes, and such we find to be the case.

In the examples detailed by Dr. Greene, and in those which I have given, the expectoration was thrown up *in small quantities at each paroxysm* of coughing, and though it amounted to a considerable quantity during the twenty-four hours, yet what followed each

paroxysm of coughing never occasioned any distress to the patient, or alarm to his attendants, and was excreted gradually and regularly, without producing any violent or distressing symptom to the patient; and the removal of the empyema, as shown by diminution in the extent of the dulness and return of respiratory murmur in the affected side, was equally gradual and progressive. But, in the second class of cases, where a direct communication has been established, we have, in addition to the rapid development of the physical signs denoting the accident (such as the sudden removal of the dulness, with metallic phenomena of the voice and cough, and a tympanitic sound over the portion of the chest previously dull), *a violent and sudden paroxysm of coughing, usually accompanied with expectoration of a large quantity of pus, so great as in almost every instance to produce the most alarming symptoms of suffocation, and not unfrequently even death from this cause.* This is followed by relief for a time, but a second and third accumulation of the matter takes place, which is again got rid of in the same way; and on each occasion the patient's life is in imminent danger from asphyxia."

[It might seem difficult to distinguish these cases from true pulmonary abscesses, but these latter affections "are not accompanied with very copious expectoration, but on the contrary are found to contain an exceedingly small quantity of pus." Pneumonic abscess is moreover one of the rarest lesions met with in the lungs, and almost always occupies the base of the organ, while tubercular abscess is situated in the apex. The points discussed in this admirable paper of Mr. Mac Donnell are summed up by him as follows:—]

1. That in cases I., II., and III., we are presented with a new form of empyema, which may be termed "Pulsating Empyema of Necessity," exhibiting some features common to that form of empyema and to thoracic aneurism, and encephaloid disease of the lung.
2. That it may be diagnosed from thoracic aneurism, by
   a. The history of the case.
   b. The dullness extending over the whole side, the pulsation being only felt in the external tumour.
   c. The absence of thrill.
   d. The absence of *bruit de soufflet.*
   e. The extent and nature of the fluctuation.
3. That it may be distinguished from encephaloid disease of the lung and mediastinum, by
   a. The absence of the expectoration resembling *black currant jelly.*
   b. The absence of a persistent bronchitis.
   c. The absence of a varicose condition of the veins and œdema of the side affected.
   d. In cancer of the lung the situation in which the external tumours form, is not invariably confined to the thorax.
4. That copious purulent expectoration in empyema is not always

indicative of cavities in the lung ; but, on the contrary, is of frequent occurrence in this disease, and seems to be the result of an effort of nature to get rid of the purulent collection by the nearest and readiest outlet.

5. That this symptom, when it results from the above cause, is not attended with the usual symptoms either of abscess of the lungs, or inflammation of the bronchial mucous membrane.

6. That a *true* bronchitis of the sound lung frequently complicates empyema.

7. That still more frequently the sound lung becomes congested, and presents some of the ordinary signs of bronchitis and pneumonia, from both of which it may be distinguished by attention to the rules laid down in the previous part of this communication.

8. That in addition to *depression* of the liver, from mechanical causes, that organ is likewise *enlarged from engorgement with blood* in empyema.

9. This enlargement is not confined to empyema of the right side, but occurs also when the disease is seated in the left cavity of the chest.

10. That this enlargement is identical with that which takes place in other affections of the lungs and heart, where, in consequence of their functions being impaired, an additional duty is imposed on the liver, viz., *that of eliminating carbon from the blood*, as proved by the researches of Tiedeman and Gmelin, Elliotson and Liebig ; and as occurs in the former cases, so likewise we observe in this, that the increased size of the organ is due to an additional afflux of blood, whereby its structure becomes engorged, softer in consistence, and darker in colour.

11. This condition of the liver has been observed by myself as proved by dissection (see Case I.), and its presence detected in other cases that have recovered. It has also been mentioned by many writers in their accounts of the appearances noticed at the autopsies of cases of empyema, who have recorded the fact, though unaware of its connection with the subject under discussion, and it must now be considered as constituting an additional feature in the diagnosis and pathology of empyema.

12. This condition of the liver, when it occurs in the ordinary diseases of the heart and lungs, has been observed to disappear as soon as the obstruction to the circulation of the blood and want of proper aeration, which gave rise to it, had ceased. So likewise in empyema, its disappearance is one of the first signs which indicate the removal of the effusion, and the return of the compressed lung to the performance of its functions.

Dublin Journal of M. S. March, 184⁴, *p.* 1—44.

2.—REMARKS ON URINARY DISEASE.

By John Aldridge, M.D., Lecturer on Chemistry, at the School of Medicine, Park Street, Dublin.

[Dr. Aldridge has written an excellent paper on this subject, in which he denies the views of Liebig to be correct. He maintains]—

That a deposition of lithates in the urine corresponds with an increased quantity of urea and lactic acid; that the amount of these essential constituents of the secretion can be measured by the specific gravity, provided no unaccustomed substance, such as sugar or albumen, be present; that the relatively increased quantity of lithic acid, urea, and lactic acid, in these cases, does not depend on a greater amount of these substances being secreted by the kidneys, but upon a deficiency of water, which renders the liquid more concentrated; and that this deficiency of water proceeds from either of two causes, namely, a derivation to some other organ by flux or dropsy, or by a sympathetic irritation of the kidneys themselves. The experienced physician will at once perceive the importance of the truth of this proposition; by means of it he can discover in a case where the urine is high coloured and concentrated, and where there is no excessive sweating, diarrhœa, nor dropsy from the heart or liver disease present, the existence of an irritation in the head, chest, or abdomen, perhaps in other respects latent. Or, on the other hand, if the urine be pale and transparent, although strabismus, convulsions, delirium, heat of head and bounding carotids should all display themselves, he can confidently say, "there is no inflammation here; this is hysteria."

It may therefore be admitted as established, in the present state of science, *that in disease the urine is more frequently characterised by alterations in the quantity of water excreted, than by changes in the proportions of its essential organic elements; and that a deposit of lithates, in a case where there is excessive secretion from no other organ, is the sign of an irritation, either primary or secondary, of the renal substance.*

Relations of Sugar and Albumen.—Late researches have ascertained that albumen, fibrine, and caseine, are all identical in composition, with the exception of certain quantities of sulphur and phosphorus that they contain. The name of *proteine* has been given to the constant proportions of carbon, hydrogen, nitrogen, and oxygen, which are common to them all. This proteine is composed of C_{48}. N_6. H_{36}. O_{14}. Moreover, the gluten, albumen, and legumin of vegetables contain proteine, the same as the essential constituents of the blood and milk in animals.

Vogel and others have shown that the vegetable principles just enumerated are capable of being dissolved in the stomachs of animals, and absorbed as ready-formed blood, capable of nourishing the tissues. There is reason to believe that these vegetable substances are formed out of sugar and ammonia, by the loss of oxygen and water: thus,

$$4\,(C_{12}\,H_{12}\,O_{12}) + 6\,(NH_3) - 30\,(HO) + O_4) = C_{48}.\,N_6.\,H_{36}.\,O_{14}.$$

Now, if the essential constituent of albumen is capable of being formed out of sugar and ammonia, with loss of water and oxygen, there is no reason why sugar and ammonia should not be capable of

being generated out of albumen, by combination with oxygen and the elements of water.

In diabetes mellitus sugar is present in the urine : its presence in the blood in this disease has been stated by Ambrosiani, Maitland, and M'Gregor : chemists of the first eminence have, however, failed in detecting it ; Liebig, in his late work, takes it for granted that its presence in the blood never has been proved. After all, if found in the blood, its origin would remain equally obscure. The true question is, what is the source from whence the sugar is derived ?

Not from vegetable food ; I have seen persons labouring under this disease fed for weeks upon an aliment purely animal, yet they have discharged ounces of sugar daily. I do not mean to deny, that animal food is calculated to diminish the quantity of sugar in the urine ; I look upon it, in a remedial light, as a useful means of combating the disease. But let any physician recollect the amount of farinaceous food, which a diabetic patient in hospital ordinarily consumes, and compare it with the quantity of sugar he passes in his water, and the simplest arithmetical calculation will show that the one cannot possibly be the source of the other.

Liebig has demonstrated that plants are constantly preparing the food of animals, and that animals are as perpetually disengaging the food of plants : in the one there is a continual process of forming organic substances, in the other of decomposing them. The water, carbonic acid, and ammonia eliminated from animals, serve as aliments for vegetables. I can see no objection to the hypothesis being examined, that the sugar and ammonia which by their combination produce albumen, may be formed, in certain cases, by its decomposition.

The circumstances under which sugar becomes secreted in diabetes, agree with this hypothesis:—The perspiration being suppressed, the quantity of water necessary for the formation of sugar and ammonia out of albumen may be conceived to be thus afforded.

But there are two observations that seem to add strength to this opinion. The first is, that in all cases where I have had an opportunity of examining diabetic urine immediately upon being passed, I have invariably found it neutral ; this may be explained either by the acid of the urine being saturated by ammonia or some other base, or by its being secreted in diminished quantity. The former supposition would accord with the hypothesis of the sugar being derived from the decomposition of albumen. This urine, although at first neutral, rapidly becomes acid, from the sugar undergoing the lactic fermentation, and the acid thus generated throws down the lithic acid in large crystals. After some time, confervoid filaments, beautiful microscopic objects, become diffused through the liquid ; and still later, if mould collect upon its surface, globules of various sizes form, which M. Quevenné considers to be yeast, but which I think are the sporangia of the fungi. This I believe to be the history of the putrefaction of diabetic urine.

The other observation is, that diabetic blood contains less albu-

men than normal, in proportion to its other constituents. The blood of a diabetic patient that I examined some time ago, contained in 2285 grains,

Fibrine	7.9
Hæmatosyne	411.5
Albumen and insoluble salts ...	164.4
Water and soluble salts	1701.1

The quantity of water is here much less than usual; this is easily accounted for by the enormous discharge from the kidneys: but the albumen, in proportion to the other solid elements, is much diminished.

There are several points of view in which diabetes mellitus resembles Bright's disease; in both there is a suppression of the functions of the skin; in both there is a tendency to secondary complication; in each there is a new element added to the urine; in both the serum is apt to become milky from admixture with a butyracious fat; in both there is a tendency to increased watery secretion, in the one case a flux, in the other dropsy; in both there is a diminution of albumen in the blood.

Dr. O'Beirne has lately suggested, in a very ingenious essay on dropsy, published in this journal, that albumen in the urine, in Bright's disease, proceeds from pressure and consequent obstruction of the vesical veins. If so, why is not the urine albuminous in ascites depending on lesions of the heart or liver? and why is the urine albuminous in cases of mottled kidney without dropsy?

In diabetes there is often albumen in the urine, sometimes a sign of favourable import, sometimes the precursor of dropsical effusions.

Before I conclude this note, I wish to notice a practical fact with respect to the detection of albumen:—Nitrate of albumen is soluble in excess of urine; if nitric acid be added in small quantities to albuminous urine, the precipitate at first formed is capable of being re-dissolved by agitation. This proves that nitric acid is a bad means of detecting small quantities of albumen in the urine.

History of Lithic Acid Calculi.—The general opinion in the profession with respect to the formation and history of lithic acid calculi, appears to be the following:—Certain kinds of food, atmospheric influences, and particular constitutional predispositions, are supposed to generate what is called the "lithic acid diathesis,"—a state characterized by a tendency to an increased secretion of lithic acid from the kidneys. This acid and its salts being very sparingly soluble, are apt to concrete in the first urinary passages, forming gravel, or, it may be, small calculi, which, by-and-by, carried down by the force of the urinary torrent, and tearing their way along the ureters, produce fits of nephritic colic. Some of these small calculi may be retained in the bladder, where they will grow at the expense of the saturated liquid that flows by them; but producing much annoyance in the bladder, and impeding healthful exercise; a cachetic state is brought on, and a new diathesis established.

This latter diathesis is the phosphatic, in which there is a tendency to an increased secretion of phosphates; these salts being also sparingly soluble, obey the usual laws of crystallization, and deposit on the nucleus already formed by the lithates. This diathesis may for a time be removed by treatment, but only to make room for a return of the lithic acid diathesis.

The treatment which this hypothesis suggests is exceedingly simple. Alkalies dissolve the lithates, and acids dissolve the phosphates. So, of course, when the lithic acid diathesis prevails, you give alkalies; and when the phosphatic diathesis predominates, you exhibit acids.

I believe the whole theory to be founded on misapprehension. I have already given my reasons for disbelieving in the existence of lithic acid and phosphatic diatheses; I will not recapitulate them here, but simply present, in the form of propositions, what I believe to be the truth.

1st. Whenever the perspiratory secretion from the skin, the gastro-pulmonary mucous membrane, or the cellular tissue, is increased, the quantity of water in the urine becomes diminished.

2nd. Whenever there is an irritation of the kidneys, whether primary or secondary to an inflammation, acute or subacute, of any other organ, the quantity of water in the urine becomes diminished.

3rd. Whenever the quantity of water in the urine becomes diminished, below the minimum necessary for holding in solution the sparingly soluble lithic acid, or super-lithates, at a given temperature, those substances will become deposited at that temperature, provided the urine be sufficiently acid.

4th. Whenever lithic acid, or the super-lithates, become deposited and retained in any part of the urinary passages, they act as foreign bodies, and excite an inflammatory action in the contiguous mucous surfaces, which inflammatory action is apt to spread downwards to the extremity of the urethra, and upwards to the tubular and cortical substances of the kidneys.

5th. Whenever the tubular and cortical substances of the kidneys become inflamed, in a subacute manner, a generally cachetic state of the system is produced, and the urine ceases to be acid.

6th. Any irritating cause, such as the incautious introduction of sounds, &c., is apt to convert the subacute into acute inflammation of the kidneys, marked by frequent rigors, suppressed or scanty and bloody urine, &c.

7th. Whenever the urine ceases to be acid, it can no longer hold the earthy phosphates in solution, which then become deposited on any substance in the urinary passages calculated to act as a nucleus.

8th. In order to prevent the deposition of lithic acid, or the super-lithates in the urinary passages, the causes which produce diminution of the quantity of water in the urine, according to propositions first and second, must be removed.

9th. In order to prevent the deposition of the phosphates, the

acidity of the urine must be restored by subduing the existing nephritis, whether acute or subacute.

10th. In certain cases of chronic cystitis, phosphate of lime becomes secreted from the mucous membrane of the bladder.

11th. The chief deposit from the urine, when alkaline, is composed of crystalline phosphates.

12th. The fusible calculus, which is a mixture of crystalline phosphate and phosphate of lime, is produced in complications of chronic cystitis and subacute nephritis.

Dublin Journal of Medical Science, January, 1844, *p.* 444—478.

3.—ON ALBUMINURIA.

By J. D. Heaton, M.D., Physician to the Leeds Public Dispensary and Lecturer on Botany at the Leeds School of Medicine.

[Dr. Heaton has reported a series of interesting cases of this disease occurring in University College Hospital, under the care of Dr. Williams: and although these cases are of a disease which so generally proves fatal, we find some excellent remarks appended which we think will prove interesting. Dr. Heaton found no remedy afford so much relief to the uneasy sensations of the patient as rather large purgative doses of cream of tartar, given two or three times a week: this may be combined with some diuretic, especially the infusum diosmæ, combined with sp. æth. nit. and tinct. scillæ. He has not found the tinct. cantharidis worthy of the confidence which some practitioners place in it. In short we may say that the treatment in these cases is too often a failure altogether.]

Perhaps these cases, taken in connection, may be considered as affording some illustration to the views which Dr. Williams has for some years explained in the wards of University College Hospital, and has now embodied in his late work on the Principles of Medicine, as to the analogy which exists between various organic diseases affecting certain viscera, but not of a malignant nature. Tubercle in the lungs, cirrhosis of the liver, granular degeneration of the kidney, and opacity and thickening of the valves and membranes of the heart, are all regarded as the result of a deposit of lymph of a cacoplastic or imperfectly organizable character; such lymph shewing a strong tendency to induration and contraction subsequently to its deposition, the more marked as it is the further removed from the healthy standard.

Lymph of this imperfect nature may be deposited as the result simply of local causes, as we see in the contracted cicatrices resulting from extensive burns, and other serious injuries of the surface; but, as affecting internal organs, it usually depends on some imperfection of the system or constitution, analogous to that seen in persons of a scrofulous habit, and which may be either congenital, or developed in the individual *de novo*. In such individuals it may be

deposited in an organ either in consequence of inflammation, acute or more usually of a low and chronic character ; or, where the constitutional predisposition is strong, instead of the healthy lymph supplied for the ordinary textural nutrition of all parts, without any previous disease in the affected organ.

Resulting, then, from the same unhealthy state of the constitution, and differing in their symptoms and physical characters rather from the circumstances of the organ affected than in their essential nature, a very probable opinion might be formed, *à priori*, that the diseases already mentioned—and if there are others of an analogous nature—would be found, in many instances, more than one of them affecting the same individual. Almost each of the cases already related confirms the truth of this opinion. We have seen the granular disease of the kidney connected with tubercle of the lungs, and with a cirrhose state of the liver, one or both, in many instances ; also, with diseased valves of the heart, and with tubercular deposit on the peritoneum. It is perhaps questionable how far softening of the brain, in any of its forms, can be included under the same category as the diseases already mentioned ; it is, like them, an organic change, wanting the true characters of a malignant disease, but it presents none of the tendency to contract which, at one period or another, is common to the other diseases enumerated. This may, perhaps, merely depend on the great difference which exists between nervous matter and all the other textures of the body ; the fatty matter of the blood, rather than the liquor sanguinis, being perhaps more particularly poured out for the nutrition of this tissue. Certainly softening of the brain is, like them, dependent on a degeneration of the healthy tissue, and probably of a constitutional origin. In two of the cases this disease coexisted with the degeneration of the kidney, which led to their introduction here.

As to the case of tubercle of the lungs, so with regard to the disease of the kidneys under consideration, it has been a matter of considerable discussion whether it be of an inflammatory nature or otherwise. That view which, with regard to the former disease, served both to explain the cause of the question, and to afford its solution, serves the same purpose with regard to the latter, namely, that being a disease which, from its nature, may depend either on constitutional causes merely, or on this as a predisposing cause, but excited by a local inflammatory action : both opinions seem to be true in different instances, and in support of both many cases may be brought forward. In some of the cases here related probably the disease may have had merely a constitutional origin ; for no cause appears likely to produce an inflammatory action of the kidneys, nor can it be ascertained that the symptoms of such a state have at any time existed : the disease has slowly invaded, and only been discovered when so far advanced as to produce dropsy or other easily recognisable symptoms. In other instances, either an exposure to cold, or habits of intoxication—both causes likely to produce congestion or inflammation of internal organs—have preceded any of

the symptoms of the disease ; in these instances the disease has probably taken its origin in a congestive or inflammatory state of the kidneys. Certainly most cases which develope themselves suddenly as an acute disease may generally be traced to some such exciting cause ; and in such cases the antiphlogistic treatment is that which is necessary, and is most successful.

An instance of this presented itself in a man under the care of Dr. Thomson, in the same hospital, but some time before the period when these cases occurred, where the disease was too far advanced to hope for cure, but where cupping over the loins had been tried on various occasions ; and it was noticed that for a few days after each application of this remedy the amount of albumen in the urine was occasionally diminished, and the urea augmented. Here, probably, an inflammatory state of the kidneys coexisted with the albuminous degeneration.

The correct view of the nature of the disease seems to be, that it depends on a deposit of lymph of an imperfect character in the texture of the kidney, affecting particularly the cortical substance, but as the disease advances invading also the tubular structure. That where the constitution is very imperfect, this may depend on constitutional causes merely, in which case the bad lymph is deposited in the ordinary process of textural nutrition, but that in many cases this constitutional cause may be aided, and the disease excited, by an inflammatory state of the affected organ, in which case the bad lymph may be poured out not merely in connection with the nutritive process, but as an inflammatory effusion.

Allowing to the kidneys the property which Dr. Prout supposes them to possess, of exerting a disorganizing influence on the materials to be discharged by these organs, it appears sufficiently intelligible why, when the proper texture of the kidney is supplanted by a morbid deposit, these organs should lose this property, and pour out as through a mere filter, the fluid part of the blood, retaining more or less of its albuminous character. It seems difficult to afford a probable explanation of the great diminution in the amount of the red globules in the blood, which seem essential to this disease. Whatever this may be, it is not unlikely that the great tendency to dropsical effusion depends on this state of the blood ; as in chlorosis. —another disease in which there is a great diminution of the colouring matter of the blood,—there is a very similar tendency.

Med. Gaz. March 29, 1844, *p.* 850.

4.—EFFECTS OF REAGENTS UPON URINARY DEPOSITS.

By J. W. Griffith, M.D., F.L.S.

The characters in the first columns, combined with the microscopic appearances, will serve to distinguish one from the other, and, being readily applied, will be sufficient for the use of those who have not opportunities for their minute investigation.

Name of Deposit.	Ordinary Colour.	How affected by				Blowpipe upon Platinum Foil.	Characteristics.
		Boiling Water.	Sol. of Ammon.	Sol. of Potassa.	Acetic Acid.		
Lithic acid	Yellowish-brown.	0*	0†	Dissolved.	0	Dissipates it entirely	When evaporated to dryness with dilute nitric acid and ammonia subsequently added, a pink colour is developed.
Lithate of ammonia‡	Whitish, pink, brown, & red brown	Dissolved	Instantly dissolved.	Idem.	0§	Idem‖.	Idem.
Phosph. of lime	White, amorphus	0	0	0	Is dissolved without effervescence	Unaltered.	Nitrate of silver causes a yellow precipitate in the acetic solution, which is also precipitated by oxalate of ammonia.
Ammonia-co-magnesian phosphate.	White, generally crystalline	0	0	0 The odour of ammonia is evolved by heat.	Is dissolved without effervescence	Ammonia is evolved, otherwise unaltered	Nitrate of silver precipitates the acetic solution yellow; this, however, is not precipitated by oxalate of ammonia.
Oxalate of lime.	White, generally crystalline	0	0	0	0	Leaves an alkaline ash, which efferv. with, and dissolves in, dilute muriatic acid	The solution is precipatated by oxalate of ammonia.
Cystic oxide.	White, bluish, or greenish	0	Is dissolved.	Is dissolved.	0	Entirely dissipated	Crystallizes from the ammoniacal solution on evaporation. When boiled with hydrated oxide of lead, the black sulphuret is formed.
Carbon. of lime.	White	0	0	0	Is dissolved with effervesc.	Leaves an alkaline ash	This ash is soluble in acetic acid, and the solution precipitated by oxalate of ammonia.

* 0 signifies no effect.

† Those effects which take place at once or within a few minutes only are noticed.

‡ When lithate of soda is present, the reagents mentioned act much more slowly and imperfectly.

§ Acetic acid decomposes lithate of ammonia, and throws down the lithic acid, so that one deposit occupies the place of the other, and no apparent change occurs.

‖ If lithates of soda or lime are present an alkaline ash is left.

Med. Gazette, March 22, 1844; *p.* 830.

[While placing the foregoing table before our readers we cannot help extracting some most valuable remarks on the same subject, from Dr. Christison's treatise on diseases of the kidneys, published in the Library of Medicine. They form the best epitome which we know, of the views now entertained on this interesting subject.]

Sometimes the quantity of the urine is greatly increased, occasionally to forty or fifty pints a day; and this without its constitution being changed. Sometimes, on the other hand, its quantity is much reduced; or it is even entirely suppressed. The density is often preternaturally great, reaching occasionally to 1055 or perhaps even higher. Frequently too it is excessively low, and in some cases has been observed at 1001, or even almost as low as that of water. The daily discharge of solids is often unusually great, and has been known to reach so high as thirty-six ounces avoirdupois; while on the contrary it is often very small, so scanty at times as only eleven grains.

It is often so loaded with its ordinary constituents as to deposit a copious sediment on cooling. Sometimes, owing to a superabundance of one or more of them, it is muddy even when first passed. Its colour is often altered to blood red, cherry red, brown or orange. Its odour is sometimes ammoniacal from the first moment it is passed, or becomes so in an hour or two; or it is feeble; or like that of honey; or modified in a variety of ways by particular articles of food and drink. Its taste is also often altered, being sometimes unusually alkaline, or preternaturally saline, or feeble though otherwise natural, or distinctly sweet. Its action on the vegetable colours is also often altered; instead of rendering litmus paper red, it turns reddened litmus purple, which is owing to the presence of an excess of ammonia in the form of carbonate.

Of its ordinary ingredients the *Urea* is perhaps most frequently affected in quantity. Sometimes it appears nearly or altogether wanting; sometimes twice or thrice the average for the most perfect urine is passed daily, in which case the density is usually very high, namely 1032 or even more, and the proportion of urea is so great that in cool weather nitric acid will cause crystallisation of nitrate of urea without the fluid being concentrated.—The *Lithic acid* is also very often altered in quantity. Sometimes it is nearly wanting; but a much more important condition is superabundance of this principle, in which case the urine either forms an excessive deposit on cooling, or yields a muddiness or precipitate with a few drops of nitric acid, or contains gritty particles, or even small calculous concretions of lithic acid and lithate of ammonia, at the moment of being passed. Lithic acid exists less frequently in the free state in urinary deposits than in a state of combination with ammonia. When free, the deposit does not necessarily depend on the lithic acid being present in excess in the urine; for it may be simply occasioned by an excess of a stronger acid, such as the muriatic or phosphoric, disengaging the lithic acid from its natural state of combination with ammonia. The

uncombined lithic acid tends to the crystalline form. It is known by being insoluble in muriatic acid, sparingly soluble in solutions of the alkaline carbonates, easily soluble in solution of potash, without evolving ammonia, and convertible by heat and nitric acid into a solution which leaves a red residuum when evaporated, and then forms a purple solution with ammonia. It is seldom all uncombined however in lithic deposits, being usually either in part or altogether united with ammonia. Deposits of this nature are generally amorphous, seldom crystalline, and present the same chemical properties with uncombined lithic acid, except that they dissolve readily in solutions of alkaline carbonates, give off ammonia when dissolved in solution of potash, and are more soluble in water.—The *Earthy Phosphates* are more rarely increased in amount. Sometimes they abound so much as to render the urine milky when passed ; more frequently they render it opalescent, and afterwards form a scanty white sediment after a few hours of rest ; occasionally they do not separate for a few hours, the urine being previously clear, in which case it is commonly observed that this fluid becomes in the first place ammoniacal ; occasionally too they do not separate for a long time, but may be detected in the form of a white flaky precipitate by boiling the urine. The deposit in all these cases consists very rarely of phosphate of lime only, often of the phosphate of magnesia and ammonia, frequently of both together. In certain circumstances the earthy matter is discharged not in the form of an impalpable sediment, but in that of a gritty powder, or in calculous masses of appreciable magnitude. The phospates are known by being soluble in acetic acid and in muriatic acid, but insoluble in aqua potassæ. If ammonia is disengaged by the potash, the ammoniaco-magnesian phosphate may be presumed to be present. If the solution in acetic acid precipitates with oxalate of ammonia, phosphate of lime is present. If, after the addition of oxalate of ammonia, a precipitate be occasioned by ammonia, the ammoniaco-magnesian phosphate is present. If both re-agents occasion a precipitate, the sediment contains both phosphates. A mixture of the two is remarkably fusible before the blow-pipe flame.

Another frequent impregnation is *serum*, or more correctly speaking, *Albumen*. It is possible that the presence of a small proportion of albumen is sometimes consistent with the healthy state of the secretion,—scarcely however if the impregnation is habitual. When scanty, it is detected by the action of heat and the mineral acids ; being separated in the form of a fleecy powder when the urine is heated near to its boiling point, and remaining undissolved on the subsequent addition of nitric acid. The last character is requisite in order to distinguish this principle from an excess of earthy phosphates, as these are easily separated by heat in the form of flakes. Albumen, when present, varies greatly in its proportion ; being often less than one part in 1000, and at times so great as twenty-seven parts ; in which case the urine is observed to form a uniform and pretty firm jelly on being heated. A remarkable ingredient of

one variety of urine is *sugar*. This principle usually renders the secretion superabundant and often excessively so, sweet to the taste, of high density, and fermentable with yeast. Its proportion and quantity vary very much. In a case not long ago under the writer's care towards thirty ounces of sugar must have been discharged daily for several days together. According to Dr. Prout a moderate impregnation with sugar is sometimes met with in old dyspeptics or gouty people, without occasioning diuresis or any serious illness ; and this statement is confirmed in some measure by Dr. Venables. But much more generally sugar in the urine is associated with great increase of its quantity, and with fatal constitutional derangement.

Carbonate of ammonia is not an uncommon ingredient. It is derived from the urea, which in certain diseased states appears to be secreted with its properties imperfect, and among the rest, more prone to decomposition. It may be often remarked by the ammoniacal odour of the urine, after standing for a few hours ; but sometimes the same test will detect it in what is quite fresh and newly passed. Whenever the odour of urine is ammonical, an acid disengages a large quantity of carbonic acid. This condition of the urine is almost universal when the earthy phosphates abound as a sediment. *Nitric acid* is said to be an occasional ingredient of urine, having been apparently met with in some forms of inflammatory fever, and also, according to Dr. Prout, in some purple deposits. One of the most interesting morbid ingredients of the urine is *Oxalate of lime*. This constitutes the material of certain forms of gravel, and more frequently of certain calculi. Chemists and physiologists were long at a loss to account for its presence upon chemical grounds ; but the difficulty is removed, since Liebig and Wöhler lately proved that oxalic acid is formed from urea by the action of certain oxidating agents, such as peroxide of lead. It always exists in the form of a deposit or concretion. Some have supposed that free oxalic acid may at the same time be occasionally present, but this has never been proved except where the acid was swallowed, which Krimer showed may pass out unchanged with the urine. Oxalate of lime is known by being insoluble in aqua potassæ, insoluble in acetic acid, soluble in nitric acid, and convertible at a red heat into carbonate of lime. *Carbonate of lime* is a rare ingredient of urinary deposits. It is to be detected by dissolving with effervescence in muriatic acid, and forming a solution which is precipitated by oxalic acid in excess.

Among the rarer sedimentary matters may be reckoned the *Cystic oxide* of Wollaston, or cystine of later authors. It is probably not so rare as has been hitherto thought, because till of late the attention of practitioners has been chiefly confined to this principle as existing in the form of caluli. It has been recently met with by Dr. Prout, Dr. Venables, and Dr. Willis, in the form of fine impalpable powder, sometimes constituting a deposit, sometimes a scum on the surface, sometimes a floating cloudiness. It may be suspected to exist, where the urine is greenish yellow, muddy, and of a mixed odour of fetid urine and the sweet briar. But the true nature of the deposit is to be determined by its being soluble in di-

luted muriatic acid, insoluble in tartaric, acetic, or citric acid, soluble in aqua potassæ, precipitable from this solution by solution of bicarbonate of ammonia, and by its emitting a very peculiar odour when heated. Sometimes the urine presents small *Prostatic calculi* derived from the prostate gland. These have a considerable resemblance to lithic concretions. They are usually yellowish, sometimes earthy and friable, sometimes firm, compact, and polished. They may be known by their appearance, by their being homogeneous, not in concentric layers, and by their containing no other phosphate except that of lime, which very rarely exists alone in true urinary calculi and deposits.

[In the following paragraph Dr. Christison recapitulates the whole method of investigation.]

The lithic gravel is greyish, reddish, or brownish, insoluble in diluted muriatic acid, and easily soluble in aqua potassæ, commonly with evolution of ammonia. It consists of variable proportions of lithic acid and lithate of ammonia, the former of which generally abounds most in the crystalline, and the latter in the amorphous forms of it. The corresponding urine is scanty, usually high in density and colour, always at first acid to litmus paper, prone to deposit an adherent sand on standing, and often yielding with a few drops of nitric acid a cloud or flaky precipitate, which disappears under a boiling heat, accompanied commonly with a reddish or purplish change of colour. Phosphatic gravel is usually white or pale grey, and amorphous or crystalline ; and it is insoluble in aqua potassæ, but easily soluble in diluted muriatic or acetic acid. It consists very rarely of phosphate of lime alone, sometimes of the phosphate of magnesia and ammonia, and often of both compounds. If ammonia be evolved under the action of potash it contains the ammoniaco-magnesian phosphate ; if not, it contains only phosphate of lime. The corresponding urine is copious, pale, low in density, ammoniacal from the first or very soon afterwards, prone to decay, and often rendered turbid by boiling, a white flaky precipitate being separated, which is easily soluble on the addition of nitric acid. Oxalic gravel is commonly brown, ash-grey or bluish, compact, occasionally crystalline, sometimes smooth, sometimes tuberculated ; and it is soluble in diluted nitric acid, scarcely soluble in diluted muriatic, insoluble in acetic acid, insoluble in aqua potassæ. The corresponding urine has been little studied. It is clear, probably pale and low in density, and if it contains, as seems not unlikely, a little oxalic acid, it will give with solution of muriate of lime a white precipitate not soluble on the addition of a few drops of muriatic acid. Cystic gravel has a crystalline somewhat waxy appearance, and it is soluble in diluted muriatic acid, insoluble in acetic acid, soluble in solution of carbonate of potash, from which it is precipitated by carbonate of ammonia. The corresponding urine is greenish-yellow, of a peculiar odour, like that of the briar mingled with that of decayed urine, and it remains turbid after some hours' rest.

Library of Med. vol. 4, p. 219-223.

5.—ON THE RESPECTIVE VALUE OF THE TESTS FOR DIABETIC URINE.

By Golding Bird, A.M., M.D., &c., &c.

In the treatment of a disease so intractable and fatal as diabetes too generally proves, it becomes of essential importance to detect the first deviation from health. The earliest evidence of this, in the disease in question, is, as is well known, to be sought for in an examination of the urine, as a saccharine condition of that secretion is at least the most constant, if not the necessary, accompaniment of almost every phase of diabetes mellitus. It must not be supposed, however, that the existence of traces of sugar in the urine is indicative of the necessary presence of a confirmed diabetes ; for it is beyond all doubt, that small quantities of this principle may occasionally exist as the result of a depraved state of the primary or secondary assimilative processes. Still, as far as experience has extended, it has shown that such a condition of the urine must be regarded with great anxiety as a most suspicious symptom ; as one which, at least, points out the existence of a most deranged condition of the functions of the stomach, and one which may, in all probability, if its cause be unchecked, be the forerunner of one of the most intractable diseases falling under the province of the physician.

It is true that in advanced diabetes, where the disease has become confirmed, and the system has suffered severely from its depressing influence, the increased quantity of urine, coupled with its high specific gravity, and its general physical characters, will at once lead to the detection of the disease. Every one who has attended much to the pathology of the urine must have, however, met with cases of tolerably well-marked diabetes, *quoad* the general symptoms, in which, nevertheless, neither the quantity nor specific gravity of the urine would have, by themselves, been sufficient to lead to a suspicion of the true nature of the disease. A remarkable illustration of this fact occurred in the person of a young woman who, in the past summer, was a patient in Guy's Hospital (in Dorcas ward), under the care of Dr. Barlow. She had previously been a patient of my own, and then presented well-marked constitutional symptoms of diabetes, with the exception of the absence of the excessive thirst and diuresis. This girl was 28 years of age, but had never menstruated. The peculiar state of the tongue, which resembled a piece of raw flesh, and the harsh skin, induced me to examine the urine. The density of this fluid was but 1.022—scarcely above the average, and she passed but from three to four pints in twenty-four hours. I however found that it contained a large proportion of sugar. In a few weeks the quantity increased to eight or ten pints in twenty-four hours, and she ultimately fell a victim to confirmed diabetes. There is at this moment a man, about 60 years of age, in the hospital (Naaman ward), labouring under diabetes, who, when he first came under my care among the out-patients, attracted my attention by his melancholic expression

and harsh skin. On inquiry, I found that he passed but from three to four pints of urine in twenty-four hours, and the specific gravity did not exceed 1·024. It was, however, loaded with sugar. In this case the diuresis, or excessive discharge of urine and its high density, did not appear until some weeks after I had detected the presence of the disease. I have had, for nearly four years, a patient occasionally under my care (a green-grocer residing in Goswell-street), with diabetes, who, when first I saw him, had neither diuresis nor increased density of the urine ; and these symptoms did not appear until some months after, although the urine was strongly saccharine the whole time. I need not multiply references to cases of this kind, as no doubt can exist as to the presence of diabetes, for at least some weeks, in cases where the indications afforded by the general symptoms appear to be negatived by what, on a very superficial view, may be taken for a healty condition of the urinary secretion. Of course the question of the probable presence of the sugar can at any time be solved by chemical analysis, but this involves a considerable expenditure of time as well as an amount of tact in investigations of this kind not always at the command of every practitioner ; and hence the importance of possessing some test of the presence of sugar easy in its application and satisfactory in its indications.

1. *Hünefield's test.*—Place four ounces of the suspected urine in a glass exposed to the sun's rays, and add about six drops of a tolerably strong solution of chromic acid. In a few minutes, the mixture, previously orange-red, becomes brownish, and soon after assumes a bistre-brown colour, if sugar be present. These changes take place much more quickly if the mixture of urine and chromic acid be gently warmed before exposure to light.

This test depends, for its action, upon the deoxydizing power of the sugar, by which the chromic acid is reduced to oxyde of chromium ; for after warming the mixture, the addition of a few drops of liquor potassæ produces a copious deposite of the green oxyde. As pure chromic acid is prepared with great difficulty, I endeavoured to find some preparation which might replace it, and found that, by making bichromate of potass into a paste with sulphuric acid, and boiling the magma with not quite enough water to dissolve it, a solution was obtained which, when decanted from the crystals formed during cooling, contained enough free chromic acid, or rather of a combination of this with sulphuric acid, to exhibit all the changes with saccharine urine above described. In using this solution enough should be added to the suspected urine to give it a full orange colour, without which the subsequent changes will not be perceptible.

There is an important objection to this test, which renders all its indications liable to serious fallacy, depending upon the fact that all urine containing a normal proportion of colouring matter deoxydises chromic acid ; and consequently urine, whether saccharine or not, will partially convert this acid into oxyde. This change certainly

does not occur so readily in non-saccharine urine as in a diabetic state of that fluid, but still is sufficiently marked to prevent Hünefield's test being regarded in any other light than a fallacious one.

2. *Runge's test.*—Allow a thin layer of the suspected urine to evaporate on a white surface, as the bottom of a white plate, and whilst warm, drop upon the surface a few drops of sulphuric acid, previously diluted with six parts of water. With healthy urine, the part touched with the acid becomes merely of a pale orange colour, from the action of the latter upon the colouring matter of the urine ; whilst, if sugar be present, the spot becomes deep-brown, and soon black, from the decomposition of sugar by the acid, and consequent evolution of carbon. This test is stated to be so delicate, that one part of sugar dissolved in one thousand of urine can be readily detected ; and even when mixed with two thousand parts, the indications are tolerably distinct.

Regarding the sources of fallacy to which this test is liable, I may mention the presence of albumen, which causes the acid to assume a tint nearly resembling that produced by sugar. There is also a peculiarity in its action which I have more than once had occasion to observe, namely, that if the urine is evaporated so as to be capable of being drawn into threads, it scarcely produces any change of colour, on the addition of the acid, until heat is applied. It is, however, a much more trustworthy test than the last, although certainly far inferior to the following.

3. *Trommer's test.*—This, which is the latest test suggested for the detection of sugar, was proposed by Tronmer, of Berlin, and received the sanction of Professor Mitscherlich. An account of it is published in Dr. Simon's *Physiologische und Pathologische Anthropochemie.*

Add to the suspected urine contained in a large test tube, a few drops of a solution of sulphate of copper ; a very inconsiderable troubling generally results, probably from the deposition of a little phosphate of copper. Sufficient liquor potassæ should then be added to render the whole strongly alkaline ; a greyish-green precipitate of hydrated oxide of copper falls, which if sugar be present wholly or partly redissolves in an excess of the solution of potassa, forming a blue liquid, not very unlike the blue ammoniuret of copper. On gently heating the mixture nearly to ebullition, the copper falls in the state of sub-oxide, forming a red and copious precipitate. If sugar is not present, the copper is deposited in the form of black oxide.

This test is founded on a fact long known, but not previously applied to the detection of sugar, of the power possessed by some organic matters of reducing oxide of copper as well as some other oxides to a lower state of oxidation. It certainly is the most delicate of all the chemical tests hitherto proposed for the detection of sugar in the urine, and will readily detect it in diabetic urine, even when very largely diluted.

It is important in using this test that no more of the solution of sulphate of copper be used than is sufficient to afford a decided precipitate on the addition of the liquor potassæ. If this precaution be not attended to, a part only of the black oxide will be reduced to red sub-oxide, unless a very large quantity of sugar is present, and thus the indications afforded by this test be rendered indistinct.

In his remarks on this test, Simon observes, that the presence of the urea and ammoniacal constituents of the urine may in some cases interfere materially with its indications. To avoid this, he directs the suspected urine to be evaporated to a syrup, and digested in pure alcohol. The alcoholic solution being decanted, is agitated, with dry carbonate of potass, and on being allowed to repose it separates into two layers, the upper consisting of the alcoholic and the lower of the alkaline fluid. A small quantity of a solution of sulphate of copper is then added, and the whole being warmed a yellow or yellowish-brown precipitate occurs in the lower layer, if sugar is present. I very much doubt whether this refinement of the test is ever necessary in practice, and it certainly has the objection of requiring a long time and a tedious manipulation for its completion, which is quite opposed to the character of a "*test.*" As directed by Trommer, his test can be applied to urine in a few minutes, and its indications are most satisfactory.

4. *Test of fermentation.*—The development of the vinous fermentation on the addition of a little ferment or yeast to a fluid, has long been applied as a test for the detection of sugar. It was successfully employed by Professor Leopold Gmelin of Heidelberg for the detection of sugar in the animal fluids after the ingestion of amylaceous food. Dr. Christison has, I believe, the merit of particularly suggesting the application of fermentation for the discovery of a diabetic state of the urine.

When a little yeast is added to healthy urine, and exposed to a temperature of about 80°, no other change occurs for some time except the development of a portion of carbonic acid mechanically entangled in the yeast. When sugar is present in the urine thus treated it soon becomes troubled, a tolerably free disengagement of bubbles of carbonic acid takes place, and a frothy scum forms on the surface of the fluid, which evolves a vinous odour. These changes take place with great rapidity, even when the quantity of sugar present is very small. If the evolved carbonic acid is collected, the quantity of sugar in the urine may be determined by measuring it, as a cubic inch of the gas very nearly corresponds to a grain of sugar.

In certainly the great majority of specimens of diabetic urine it is not necessary to add yeast to excite fermentation, providing a sufficient temperature be employed. This, indeed, has been stated to be the exception, but from my own experience, I can assert that I have never yet left a glassful of diabetic urine upon a chimney-piece, when there is a fire in the grate, without having ample evidence of the development of fermentation within twenty-four hours. This test is certainly one of the best that can be employed, and is

not subject to any obvious source of fallacy. It is, however, not so useful as Trommer's, as it cannot be appealed to at the moment, and requires time for the development of its indications.

Test afforded by the growth of torula.—It is a remarkable fact, that if the smallest proportion of sugar exists in urine exposed for a few hours to a temperature above 70°, and a drop of the fluid (taken from the surface) be examined under the microscope, numerous very minute ovoid particles will be discovered. In the course of a few hours more these become enlarged, and appear as distinct oval or egg-shaped vesicles, which soon become developed into a confervoid or fungoid vegetation, identical with that which appears in ordinary saccharine fluids when undergoing the vinous fermentation. In hot weather I have detected the oval spores of the torula diabetis, as the organic production is termed, in diabetic urine within a few hours after its being passed ; and for the last two years I have constantly relied on their appearance as the indication of the presence of sugar in urine. I can scarcely conceive an error arising from mistaking other organic particles for these spores, as the latter are always oval or ovoid, whilst all other of the organic particles developed in the urine are circular. As soon as the torula has appeared, vinous fermentation rapidly proceeds, and hence any possible inaccuracy arising from mistaking other particles for the spores becomes corrected.

The advantages of this test are the facility with which its indications are observed by the microscope with an object-glass of $\frac{1}{7}$th or $\frac{1}{8}$th inch focus, and the certainty of any possible fallacy being corrected by the subsequent development of fermentation. It is, however, less convenient than Trommer's, in consequence of the time required before its indications can be observed.

I have excluded from this list of tests that of Bouchardat, depending upon the circular polarising power of the urine, as it is difficult in application, requires an expensive apparatus seldom at hand, and moreover has its indications seriously interfered with by the colour and imperfect transparency of the urine.

I have more than once had my attention directed to the probable presence of diabetes by observing on the patient's trousers white spots, arising from drops of urine having dried upon them. These spots consist of minute patches of dry sugar, and are readily removed by brushing. This, although it cannot be regarded as an actual indication of the presence of sugar, is, nevertheless, useful as a leading question in investigating the patient's history.

In conclusion, I would remark that, excluding Prof. Hünefeld's chromic test, as too liable to fallacy to be of any practical value, the other tests, arranged according to the accuracy and convenience of their indications may be thus placed—

1. Trommer's copper test.
2. Growth of torula.
3. Development of fermentation.
4. Runge's sulphuric test.

The profession must remain greatly indebted to Trommer for putting it in possession of a test for the presence of sugar in urine, so easy in its application, and so distinct in its indications, with the additional value of requiring but a few minutes for its employment.

Med. Gazette, Nov. 24, 1843, *p.* 243-247.

6.—ON LARGE DOSES OF NITRATE OF POTASH IN RHEUMATISM.

By Henry Bennet, M.D., London.

[In a discussion at the London Medical Society, several eminent practitioners expressed their conviction that large doses of nitre taken by a certain patient might have been the cause of inflammation and suppuration of the kidney. The patient had taken two drachms three times a day. Dr. Henry Bennet, whose experience in the French hospitals must entitle his opinion to respect on this subject, says that the pernicious effects of the medicine in large doses will only take place when it is given in too concentrated a form, and that one and even two ounces may be given in the 24 hours when largely diluted. He says—]

When the nitrate of potass is given in a small compass, and in a single dose, half an ounce will act as an irritant poison, and occasion acute inflammation of the mucous surfaces; but if it is largely diluted a much greater quantity *may* prove innocuous, even if given in one dose, and *is sure* to prove so if administered in divided doses during the twenty-four hours.

It is principally in acute rheumatism that large doses of the nitrate of potass have been given. From some researches made by one of my friends and late colleagues, M. Aran, (Journ. des Connais. Medico-Chirur., 1841,) it would appear that the nitrate of potass was used in large doses in the treatment of rheumatism during the last century by several English physicians, whose names I am unable to mention, not having M. Aran's paper by me. At a late discussion on the subject, which took place at the Académie de Medicine, it was stated that several Italian physicians of the modern school had thus administered it, and that twenty years ago, in Paris, M. Kapler, physician to the Hôpital St. Antoine, and M. Bagneris, physician to the Invalides, had also given nitre in large doses in the above named disease.

I believe, however, that M. Gendrin, the physician to the Hôpital de la Pitié, is, of all modern physicians, the one who has paid the greatest attention to the therapeutic properties of large doses of the nitrate of potass in rheumatism. After trying, comparatively, the efficacy of the various plans of treatment which are resorted to in acute rheumatism, he has given the superiority to large doses of the nitrate of potass, and for many years has had recourse to no other therapeutic agent in the great mass of his cases. Owing to this cir-

cumstance, during nearly three years which I passed with M. Gendrin, either as clinical clerk or house-physician, *all* the cases of acute rheumatism which came into the wards were treated by nitre, in doses varying from six to twelve or sixteen drachms in the four and twenty hours, according to the age, sex, or constitution of the patient. The number of cases which I have seen thus treated must, therefore, be great, when we consider that more than two thousand patients sojourn in M. Gendrin's wards each year. Indeed, although I have kept no statistical record, I should say that I have seen treated, or treated myself, at La Pitié, in this manner, at least, seventy or eighty persons labouring under acute rheumatism.

With women we generally commenced with six drachms, rapidly increasing the quantity to eight, ten, or twelve. With men we generally began at once with an ounce, gradually increasing the dose to ten, twelve, fourteen, or sixteen drachms. In the very great proportion of cases, however, M. Gendrin did not exceed the dose of twelve drachms, or approve of its being exceeded. The salt was always administered dissolved in a large quantity of barley-water, sweetened with sugar, the proportion being about half an ounce to a pint and a half or two pints of fluid. This was the *only* beverage allowed to the patient, and taken by him as required.

In this large number of cases I do not remember once seeing any toxical symptoms produced. The secretions of the skin and kidneys were generally increased, and sometimes those of the intestinal canal, but the principal action of the nitre seemed to be a sedative action, the pulse generally falling rapidly, both as regards frequency and strength. It is, no doubt, to this sedative, contra-stimulant action that we must look to explain its undeniable efficacy in the treatment of acute rheumatism. Although the narcotic action of nitrate of potass is generally admitted, it is but little insisted on. The experiments of Orfila, however, cannot leave a doubt on the subject in the mind of any one who has perused them ; the death of the dogs to which nitre was administered being preceded by giddiness, slight convulsions, dilated pupils, insensibility, and palsy. It is only in a very few instances that I remember having seen vomiting follow the ingestion of the fluid containing the nitre, and then it was but slight, and soon ceased, without its being necessary to discontinue the use of the medicinal agent.

I do not recollect having once seen any symptoms of renal irritation or inflammation produced by these large doses of nitrate of potass, and have never heard M. Gendrin, whose experience on the subject is necessarily very great, say that he had met with such a case. M. Martin Solon, in the communication which he made last October to the Academy, on the treatment of acute rheumatism by large doses of nitre, does not mention having observed a single instance of renal affection in the thirty-three cases which he had treated by doses varying from one to two ounces. It cannot be said of these two physicians that renal affections may have presented

themselves without their having perceived it, as they are both accurate and conscientious observers, and have both paid particular attention to the pathology of the kidneys. M. Martin Solon, indeed, is the author of one of the best French works on "albuminuria" which has yet appeared.

I have myself not only administered an ounce or more of nitre in the four-and-twenty hours, for many days consecutively, in acute rheumatism, but also in puerperal fever and in other inflammatory diseases, with, I think, marked benefit, and without ever observing any toxical symptom.

Lancet, Feb. 10, 1844, *p.* 638.

7.—ON THE COMPARATIVE VALUE OF THE DIFFERENT PREPARATIONS OF MERCURY AND IODINE, AND THE BEST MODES OF ADMINISTERING THEM.

By Edward Octavius Hocken, M.D., &c., Physician to the Blenheim-street Infirmary.

Mercury is employed locally and generally, either to produce a local effect simply, or, by its admission into the system, to bring the whole constitution under its influence. The mercurial influence is induced in the system by the introduction of mercurial preparations into the stomach, or by fumigation, or by inunction. In the first method we employ the chloride, bichloride, iodide, *pil. hydrarg.*, &c. &c.

Chloride.—Calomel is chiefly useful when we wish to produce a speedy and powerful action on the constitution, as in venereal iritis or orchitis, but is less adapted to the ordinary symptoms. On the Continent it is extensively employed in tubercles of the labia, with or without ulceration, in various forms of creeping ulcers, and also in ulcerations of the throat and nasal fossæ. Desruelles says, that he cannot too much recommend this preparation, which, united to opium and an antiphlogistic regimen, may produce the most beneficial results. Ricord employs the following pills in the treatment of enlarged testicle, which remains after inflammation of that organ :—

> Hyd. Chor. ℈i. Pulv. Conii, Sapon. Hisp. āā ℈ij. M. ft. pil. xxiv.

Bichloride.—M. Dupuytren ordered this remedy in small doses, one-sixth of a grain three times a day, in constitutional syphilis, and on the Continent it still continues to be extensively used for this purpose. In some chronic cases of syphilitic skin disease, I have seen it used with advantage ; but as a general remedy in secondary syphilis it requires more care, is more dangerous, and altogether is a less eligible medicine than blue pill.

Pilula Hydrargyri.—This medicine is the form most used and relied on in England, and as it is one of the mildest, safest, most certain, and most manageable preparations of mercury, it justly

deserves the preference given it. In doses of five grains two or three times a day, it is applicable to nearly all those conditions which we have shown to be benefited by mercury.

Proto-ioduret.—MM. Cullerier, Biett, Ricord and others employ this remedy in many forms of constitutional syphilis, especially where secondary and tertiary symptoms are combined, and in primary sores in strumous habits. Cullerier says, that it is chiefly in constitutional syphilis that the proto-ioduret of mercury is administered with success. Its effects are principally evident in secondary ulcerations of the mucous membrane, cutaneous tubercles, exostoses, and chronic affections of the joints, where the other preparations of mercury have had little effect. It should always be guarded by opium, and given in half grain doses twice or thrice a day. The deuto-ioduret is more stimulating, and consequently its dose is smaller. Either of these may be employed in friction upon tumours and indolent buboes, after the removal of all acute inflammatory symptoms.

The cyanuret and deuto-phosphate of mercury are occasionally employed. The former is said to be preferable to the bichloride, being less apt to disagree, and less readily decomposed. It is an useful external application in some skin affections, allaying the violent itching and irritation of what M. Alibert terms *herpes squamosus.*

Inunction.—Inunction by the mercurial ointment was formerly employed to mercurialize the system more frequently than at the present day. In this way the mineral is less apt to disagree with the system, especially the alimentary canal, although, when used alone, it is less speedy in its effects. In buboes, I imagine that Hunter was correct in his opinion concerning the advantages of making mercury pass through the affected absorbents. The *Ung. Hydrarg.* is used in the quantity of half a drachm to a drachm night and morning, to be well rubbed in, before a fire, on the more delicate portions of skin. Cullerier prefers using mercury by friction in primary sores ; he orders from a quarter of a drachm to a drachm and a half of mercurial ointment at each friction, leaving an interval between them of one, two, or three days, with the view of not irritating either the sore or the constitution, by bringing the latter suddenly under the influence of the remedy. Ricord frequently orders the frictions to the axillæ, and they are employed in this manner by Cullerier, in certain forms of ulcerations of the mouth and fauces. He narrates two cases cured by mercurial frictions in this situation, which had resisted its employment on other parts.

Fumigation.—Fumigation of the whole surface of the body is, at present, rarely used as a method of affecting the system, but the apparatus formerly employed is still to be found in some of our hospitals. It is very speedy in its action.

The remedy is, however, employed locally, and with great advantage, in some affections of the throat and nasal fossæ, directed

to the part by a suitable apparatus, and more generally in some obstinate diseases of the skin. For patients who have not strength to rub in mercury, and whose bowels will not bear the use of internal remedies, it has been esteemed highly advantageous.

Topical Applications.—As mere local applications, calomel, black wash, (Hydrarg. Chlorid. x. vel xv. grs., Aquæ Calcis ℥i.,) yellow wash, (Hyd. Bichlorid. i. vel ij. grs., Aq. Cal. ℥i.,) solutions of the bichloride in distilled water, the nitric oxide ointment, the nitrate ointment, the simple blue ointment, and the *Ung. Hyd. c. Ammoniaco*, are all of them occasionally applied. We select from these in proportion to their stimulating properties, adapting to the condition of the symptoms we treat.

Whatever preparation of mercury be selected for internal employment, it should always be combined with opium or conium, as a certain degree of constitutional irritability almost always accompanies syphilis, which is most favourably influenced by such medicines, and, in some cases where there is sthenic inflammation or fever, antimony. M. Biett's practice has constantly furnished numerous instances where these affections have disappeared under the influence of opium alone without mercury, and MM. Ricord and Cullerier support similar views. Dr. Wallace says, that it will be always most prudent to combine the mercury with opium and antimony. No harm can result from this practice ; and by it much inconvenience may perhaps be avoided. The combination of antimony and mercury has always appeared to him to render the influence of the latter more manageable, as well as more certain, while the addition of opium diminishes the irritating influence of mercury on the bowels, and subdues the disposition to an irritable state of the general system, or of the local disease. During its administration we must also carefully watch the health of the patient and the condition of his disease, and omit its further use for the time, should any unfavourable symptoms arise. The diet should be mild, and the state of the stomach and bowels attended to. Dr. Wallace recommends the patient to eat a few grains of all-spice or pepper during the day, and to cover the abdomen with two or three folds of flannel. Mr. Parker says, that a nightly pill or draught of some preparation of opium with capsicum may be employed with advantage even during the period the patient is using mercurial frictions ; the former not only prevents those attacks of pain, griping, and diarrhœa, which sometimes come on during a mercurial course, and materially retard the healing process, but they contribute directly to the therapeutic effects of the mercury.

The aspect of the sore is to be watched carefully, as it frequently points out when mercury does or does not agree with the system. Dr. Wallace says that it will be found a most important rule in practice to omit all mercurial treatment whenever there appears an increase of inflammation or sensibility, to arise in the local disease during the employment of mercury ; for a perseverance in its use, under such circumstances, will almost invariably tend to some form

of destructive action, determined in its character by the constitution of the patient. In such cases we must have recourse to emollients and anodyne applications, purgatives, rest, abstinence, and diaphoretics, with or without narcotics, and, as soon as the morbid actions which have supervened have been removed, mercury, if necessary, may be again resumed, to be suspended afresh in case of a return either of inflammation or irritability. Should an indolent condition of the sore, and absorption of the granulations, come on during mercurial influence, we must determine the cause and act accordingly.

The quantity of mercury is always to be regulated with the design of deranging the system as little as possible, and patients should be abstracted from all causes of excitement; ptyalism, &c., being considered accidental occurrences. Dr. Wallace supports the opinion, that the greater the degree of excitement or of derangement in the functions which mercury produces, the greater is the danger of its action being followed by deleterious effects, or of its ceasing to influence the symptoms of syphilis in a salutary manner. We judge of the requisite quantity from its effects on the disease, and, in general, it is necessary to affect the gums slightly, and to produce a metallic taste in the mouth; but complete salivation is rarely if ever necessary to obtain all the good effects possible in curing chancres, or preventing secondary symptoms. The cicatrization of the sore, without leaving a hardened cicatrix, should be the rule for discontinuing the remedy. When sores remain indolent, under the continued use of mercury, it may be intermitted for some time, and then resumed in some other form. It is a mistaken notion to suppose that continuing the medicine after the sore has healed, and all induration of the cicatrix has disappeared, will protect the patient from secondary symptoms; these will appear after the fullest courses, and yet occasionally they will not appear when not a single grain of mercury has been used. Another point to be borne in mind is, to examine the condition of the mouth previous to the exhibition of mercury, as a state of inflammation or ulceration, with foul breath, might lead us to attribute to the mercury what really depends on other causes.

Iodine.—M. Cullerier thinks that the effects of the iodide of potassium are less prompt than those of mercury, and that, on this account, more should be given, if the stomach will bear it. He employs grain doses of iodine with from two to four of the iodide of potassium in an ounce of water, given at intervals during the day; but he does not increase the iodine beyond two grains in the day, or the iodide beyond ten. I fully believe that the iodide is much more beneficial without the pure iodine, which disorders the stomach without benefiting the complaint. Mr. Stone, formerly apothecary to St. Thomas's Hospital, told Dr. Williams that he was called to prescribe for ten patients taking the compound of iodine and iodide of potassium for one that was taking the last medicine only.

Dr. Wallace found by experience that the iodide of potassium was the only form of the remedy which agreed, that pure iodine was a very powerful irritant, very frequently occasioning severe symptoms, whilst the iodide of potassium was perfectly harmless. Pure iodine, moreover, is converted into hydriodic acid in the stomach. He has seen many cases in which the tincture of iodine, both simple and iodureted, failed to produce any favourable influence, because the irritation excited in the stomach prevented its employment in such does as were sufficient to act on the disease, and in these very cases the action of the iodide of potassium was subsequently most beneficial. In other cases where pure iodine was employed, although the disease was cured, still it was at the expense of an injured stomach, and great emaciation. On the contrary, he asserts that he has never seen unpleasant effects result from the iodide of potassium, except from mismanagement.

Ricord employs the iodide of potassium in gradually increasing doses, commencing with ten grains dissolved in three ounces of distilled water, and given at intervals during the day, in any suitable vehicle. According to its effects so must the dose be either increased or diminished ;—when the remedy agrees, which it almost always does if the stomach be healthy, the dose should be increased ten grains every two or three days, till it is carried to one or one and a half drachms, or even more, in the course of the day. The iodide of potassium, in full doses, when it agrees, occasions a sensation of warmth in the stomach, improves the appetite, accelerates digestion, so that many grow quite fat, and quickens the pulse. A constant effect is an increased diuresis.

When pure iodine is used, or the iodide given in excessive quantities, or from idiosyncracy of constitution, unpleasant symptoms may arise. Sometimes these are slight and resemble a common catarrh ; at others, ringing in the ears and pain in the head, or the skin may suffer from a slight pustular eruption ; occasionally it disorders the bowels, or produces pain or uneasiness in the stomach, having some resemblance to pleurodynia, but seated more deeply, and an acrid dryness of the throat. Mr. Mayo says that we may sometimes correct these symptoms by adding a few drops of laudanum to each dose, and by administering aperient medicine. Authors assert that some patients experience iodic intoxication, characterized by a slight uncertainty in the voluntary movements, some *subsultus tendinum*, heaviness in the head, a species of intellectual idleness, and sometimes slight delirium. Soreness of the gums and ptyalism are also said to occur occasionally. Mr. Mayo has heard of effects resembling mercurial erythismus. Should any of these symptoms occur in a severe degree the dose must be diminished, or even abandoned altogether for a few days, and its exhibition recommenced in smaller doses.

Dr. Wallace found the urine to be the best test of the effects of the iodide of potassium on the system, by testing it with starch, &c. In some of his patients he remarked a great increase of perspira-

tion,—sometimes constipation, salivation, roughness of the throat, and heartburn ; he found that quinine controlled the state of the throat and stomach. Delicate females, he says, sometimes lose the power of sleeping so much as is natural,—a state of wakefulness often accompanied by peculiar feelings of the head, which is relieved by a purgative and interruption of the medicine. Emaciation, great gastric irritation, wasting of the mammæ and testes, &c. only occur from the use of free iodine. In two patients who had drachm doses of the iodide of potassium administered by mistake, for one day, there occurred in both sickness, soreness of throat, colicky pains, vomiting and purging to a slight degree, frequent pulse, and exhaustion, quickly disappearing. Several patients, while under the full action of the iodide, were attacked with an acute pain in the anterior and lower parts of the left side, precisely in the centre of the superfices formed by the false ribs, accompanied by some cough, difficulty of breathing, and fever. In all, the affection went off without much trouble. The medicine was omitted and subsequently resumed without inconvenience. In a private patient it produced severe indigestion, a rapid and quivering pulse, headach, and a peculiar condition of the eyes,—the pupils were dilated, and both eyes in a state of incessant motion. He was soon after seized with symptoms of paralysis on one side of his body, preceded by muscular tremblings, which remained for three weeks, but eventually passed off.

Ricord states that the good effects of the iodide of potassium have been constant in his practice, but not produced with equal rapidity, in this respect differing from Mr. Mayo, who says that no medicine, where it does good, produces amendment so rapidly ; therefore, the propriety of continuing it is never doubtful. As far as I have observed myself, iodide of potassium never gives rise to any serious symptom, provided that it be unmixed with pure iodine, and be administered in moderate doses. Apoplectic and paralytic symptoms sometimes come on during the existence of tertiary symptoms, and these are then attributed to the mercury or the iodide which the patient may be using at the time, but it is hardly fair that the whole blame should fall on the remedy. For an adult it is sufficient to commence with five grains of the iodide of potassium three times a day, and increase it gradully to seven or eight. Dr. Williams, whilst he admits that some constitutions are affected even by one or two grains, thinks that the average dose should be eight grains three times a day, for, says he, a smaller dose can hardly be recommended ; for the patients' sufferings are so intense as to require immediate relief, and consequently we ought to begin with as large a dose as his stomach will probably bear. This reasoning is not altogether conclusive, for if the dose be sufficient to excite or endanger unpleasant symptoms, we shall have to stop its use altogether for some time, and then finally resort to smaller doses, which, if used at first, would most probably have removed the complaint without any distress or delay. Dr. Williams remarks, that

when mercury has been previously and unsuccessfully used, the quantity of the iodide necessary for the cure of the patient is often much greater than where none has been exhibited.

Review of the comparative value of Mercury and Iodine in the treatment of Syphilis.—If we take a review of what has now been written, we can readily determine the comparative value of mercury and iodine in the treatment of syphilis ;—that mercury and iodine form the two main remedies on which the best and most unprejudiced treatment of the various symptoms and stages of syphilis mainly hinges, although neither of them should be regarded as a specific, nor can either of them, to be used well and successfully, be exhibited empirically ;—that mercury and iodine, when guided by observation, reason, and experience, and combined with such treatment and medicines as the profession would employ were they to lay aside all notions of something specific requiring a blind and specific use of some remedial agent, they stand alone, and infinitely superior to all other medicines which the materia medica can furnish ; that a modified use of mercury is adapted to nearly all the forms, but especially the indurated, of primary syphilis ; that in constitutional syphilis a modified use of mercury is almost a *sine quâ non* in the great majority of secondary symptoms ; but is either hurtful or useful in the tertiary ;—that iodine is inert in almost all the symptoms of primary syphilis, with the exception of some forms of phagedena, attended with great debility and derangement of the health ;—that in constitutional syphilis it is a less valuable remedy in the majority of secondary symptoms than mercury, with the exception of some severe cases of pustular eruption, phagedenic throat, rupia, and secondary ulcerations of bad character, all of them marked by a cachectic and debilitated constitution ; whilst in tertiary symptoms iodine is far more valuable than mercury, and its effects more decided and certain than in any other set of symptoms ;—that mercury and iodine are most advantageously combined in cases presenting both secondary and tertiary symptoms ;—that many forms of mercury, having local or constitutional actions, are applicable to the various symptoms of syphilis, but that the mildest constitutional effect, capable of overcoming the disease, is always to be preferred ;—that the only form of iodine safely applicable to the treatment of syphilis is the iodide of potassium, which should never be carried beyond moderate doses ; hence, however valuable the iodide of potassium may be in some forms of syphilis, it cannot be substituted with advantage for mercury in the great majority.

Edinburgh Med. S. J. April, 1844, *p.* 325—332.

8.—ON INTERMITTENT DISEASE.

By Thomas Mayo, M.D., F.R.S., Physician to the Infirmary of St. Marylebone.

There is no more interesting subject in medicine than that of masked intermittents, under which the presence of periodicity entitles a train of symptoms, differing in every other point from

those of ague, to receive with advantage the treatment belonging to that disease. But there is another view of this modification of disease, not less important : I allude to cases of the above kind, in which periodicity has been clearly established, but the treatment appropriate to intermittents is not borne.

Many years ago I was consulted in respect to a lady, who had for some time been in weak health, latterly with a progressive increase of pallor, feebleness, and emaciation ; and, what was most important, a daily recurrence of pain and oppression of the head, with some delirium. The paroxysm occurred always at about the same hour, and lasted three or four hours. Her natural constitution had been good, her person strong, her temperament not nervous, her age about 43. She had undergone much treatment among other physicians ; she had consulted Dr. Abercromby, of Edinburgh. On careful enquiry I found that, seven years before, she had had ague ; and I was led to believe that the treatment of it had been incomplete. On this supposition I directed, after securing just action of the bowels, which had indeed never been neglected, that 50 drops of Tinctura Opii should be given at about an hour before an expected paroxysm ; and that after it should have subsided, five minims of Liquor Arsenicalis should be given every sixth hour. I regret that I have not more copious notes of this case ; but I can affirm that the plan was rapidly and completely successful. In a few weeks this lady was well, though weak. I should observe that a squamous eruption, which had existed for some time on the calves of the legs, disappeared also under the above treatment.

The above case illustrates the well-known effect of treatment regulated on a presumption that certain symptoms are referrible to the presence of ague, where nothing but their periodicity could suggest such a presumption.

[In another case related by Dr. Mayo, the practice was not so successful, although the periodicity of the attacks was established. This was owing to a condition of brain, which rendered the remedies inappropriate, and perhaps even injurious. In answer to the question "what is that group of symptoms, which, combined with periodicity, entitles the intermittent to be treated as an ague" ? Dr. Mayo brings forward a case of Sauvages.]

"T. R.," he observes, "had laboured under a quotidian for six months : after a night of prolonged restlessness, a paroxysm of epilepsy occurs at the same hour as, and in place of, the expected paroxysm of ague ; and in this way, from that time, the disorder continued to run its course without any recurrence of the original symptoms." This case is valuable, not for its peculiarity, but rather as illustrating a *large* class, in which, the periodical character of the disorder remaining, the treatment by bark, or steel, or arsenic, &c., is questionable.

It has been judiciously observed, in regard to those intermittents in which the affection of a given organ is marked sometimes even

more strongly than those symptoms which characterise the disorder as an intermittent, that the affection thus evolved or brought out by the miasma may require a special treatment, distinct from, possibly at variance with, that which its simple periodicity would suggest. In this point of view the supposed affection may be less appropriately called a masked intermittent than a tendency to phlegmasia, brought into an active state as often as the system is disturbed by the paroxysm of the intermittent This disturbance of a supposed inflammatory nature may not, however, terminate with the paroxysm ; but the system may be brought gradually into a condition in which the intermittent type may be lost, and a continuous disorder substituted.

The same discriminative tact is wanted here as in another equally indefinite disorder—hysteria—in which a phlegmasia may easily combine itself with the nervous affection : a view of the subject, I apprehend, far more frequently applicable than that suggested by the terms simulating, proteiform, &c. often used as descriptive of hysteria. The disorder which this hypothesis represented as *simulated* is really *existent*, and must receive its own treatment, modified by the judgment of the practitioner as he best may use it.

The above remarks may claim some importance in relation to the present state of intermittent disease. Ague certainly has declined in frequency. But may we not in some degree exaggerate the effect of presumed improvement in drainage and cultivation of land as the cause of this diminution ? Is it not in some degree a simple change in the form of an epidemic.

The frequently intermittent type of neuralgic disorders, their general susceptibility of benefit from those remedies which are specific in agues, is obvious. But it is scarcely conceivable that so great a change should be effected in some of the features of periodical disease as the substitution of headaches, or of an epileptic seizure, or of a nervous pain, for a rigor with its subsequent febrile accession, without ground being, at the same time, afforded for a careful revision of our practice in these varied circumstances. Nor is this consideration weakened even by the remark of Dr. Maculloch, in his valuable work, " that the use of the most energetic remedies" is, in the neuralgic intermittent, "*precisely the same* as in intermittent fever."

The questions to which an inquiry of this kind would give rise are twofold.

1st. How far the specific remedies of ague preserve their anti-periodic influence under these altered circumstances of the disorder ?

2dly. How far this anti-periodic influence is, in such cases, safe or beneficial ?

3dly. What other remedies have acted with apparent benefit in such cases, as anti-periodics ?

Medical Gazette, March 15, 1844, *p.* 790.

The dependence of apoplexy upon disease in remote organs is a subject of much interest. Its occurrence in this kind of connection with pneumonia, is illustrated in the following cases:—

A. B., a large, full, healthy-looking man, aged 54, in the spring of 1843, was brought into Carroll's ward of the Marylebone Infirmary, in a state of insensibility, and died almost immediately. It appeared that he had been employed in the workhouse in bodily labour, and seemed in good health up to the moment of his seizure with apoplexy, that morning. He was described as having the day before eaten an enormous dinner of pork, &c. He went to bed apparently well.

Autopsy.—The membranes of the brain were healthy, but the convolutions flattened. A very large coagulum, with some fluid blood, distended the lateral ventricles. The basilar artery was of great size; slight appearances of ossification in many arteries of the brain. The aorta was of great size, but healthy; the heart normal. The right lung almost uniformly in a state of red hepatization; portions from every part of it sinking in water. The left lung gorged with blood, but perfectly crepitant. The stomach very large; no solid contents in it: its walls thin: its surface having a colour exactly similar to that of coffee-ground vomiting. The other viscera healthy.

In a patient of one of my colleagues, who died on the 15th of March, I observed the following appearances on examination the next day. In the upper and anterior part of the right lateral portion of the brain the first slice removed from it disclosed a very large sanguineous effusion, connected with and filling the right ventricle, and a part of the left. Between it and the cortical substance to which it was nearly subjacent, the small intervening portion of medullary substance was softened; and in this softened substance was a large branch of an artery. Whether the patent mouth of this artery was the breach through which the blood had flowed, or whether it had been divided by the knife, I cannot say. It grated under pressure, and contained small osseous points.

The heart was normal, as were the aortic valves. In the arch of the aorta were small osseous deposits.

The right lung was uniformly and firmly hepatised, of a deep red colour, all but a portion of the upper lobe, which was emphysematous.

All the other viscera were healthy.

On inquiry, I found that this man, aged 78, of a very muscular frame for that age, had been sent into the Infirmary from the workhouse on the morning of the 12th, in a state of imperfect coma, having been apparently well the night before. Except during the last twenty-four hours of his life, he could be roused so far as to answer questions. It was ascertained that he had been in a state of constipation for many days, and the nurse of the ward told me that he was known to be a very large eater. A scruple of the Pulv. Jalapæ c. Hydrarg. Chlorid. had been given him on coming in, and

afterwards a drop of croton oil. His bowels were then largely relieved, with no mitigation of apoplectic symptoms. He vomited, only in the course of the last day, what appeared to the nurse to have a fæcal character.

In the first of these cases certainly, and in the latter probably, the pneumonia was antecedent to the apoplexy ; in both it may be remarked with nearly equal degrees of confidence, that the pneumonia ran its course with an insidiousness equally important both as regards the subsequent apoplexy, and the course of the pneumonia viewed on its own account.

It is certainly probable that in these apoplectic cases the cerebral disease was mainly induced by the prior embarrassment of the pulmonary circulation. And this suggests additional grounds of attention to the phenomena of the thorax in relation to cerebral disease. But may not some prior condition of the brain tending to congestion have rendered the constitution less sensitive under the invasion of pneumonia, and thus have obscured its symptoms ?

Med. Gazette, April 5, 1844, *p.* 15.

9.—TREATMENT OF ASPHYXIA FROM HANGING.

By E. J. Shearman, M.D., Rotherham.

[Dr. Shearman relates an interesting case of this description, that of a man who had been committed for trial for stealing a silver spoon, and who was found by the gaoler's wife apparently dead, hanging by his own handkerchief to the grate of the prison, only forty inches from the ground.]

When I first saw him, says Dr. S., he was apparently lifeless ; he neither breathed, moved, nor had any perceptible circulation. He was lying on the straw bed in the prison, his face and neck much swollen, and of a blackish colour, the ecchymosed mark of the cord being immediately below the thyroid cartilage, his fingers bent, and hands nearly clenched. I immediately had his head raised, the windows and door opened, and opened a vein in his arm (in preference to the jugular vein, because the room was very dark and inconvenient for that operation), put his arm into hot water ; a little blood flowed, which gradually increased in quantity as he became warmer ; in four or five minutes he began to sob, and I let him bleed until I could feel the pulse beat at the wrist, and the pupil of the eye contracted completely on the application of a lighted candle. I then stopped the bleeding. As he so soon began to breathe, there was no ammonia applied to his nostrils. His breathing remained stertorous. I poured some hot brandy and water into his stomach, applied warmth to his body and extremities, kept his head raised, and left my assistant with him at half-past three o'clock, to see that he had as much fresh air and warmth as well as every other attention that the nature of the situation would allow.

At five o'clock I saw him again, and remained till half-past six ; he had then rallied very much ; his pulse had become firmer, but quick, 130 ; his head was very hot ; he was exceedingly restless and unmanageable, having very violent convulsive motions in both arms and legs, and required more than six men to hold him on the bed ; his breathing was still stertorous, and he could not swallow. I put him on a strait waistcoat, had his head shaved, showered it with cold water, and applied an evaporating lotion afterwards, and gave him some croton oil on his tongue, which he kept within his teeth. My assistant remained with him until ten o'clock. I saw him again at eleven, and remained until half-past twelve. His head was then excessively hot, eyes injected with blood ; he looked wildly round the room, and was so excited and strong that the strait waistcoat did not keep him in order. The croton oil had operated once on his bowels ; his pulse was very quick, small, weak, and jerking, or I should have bled him again in the arm or jugular vein ; twenty leeches were applied to his head ; I continued the cold affusion and cold lotion afterwards, and kept him as warm as possible everywhere else. I left him, fully expecting, there was so much congestion in the brain, it would end in phrenitis or meningitis by morning. Early the following morning my assistant saw him ; he had then spoken several times, was calmer, but, very suddenly, he became exhausted, and died at nine o'clock.

In this case I consider there was both suffocation and apoplexy ; so much pressure was made by the cord round the neck as to prevent inspiration, so that immediately the lungs, right side of the heart, and veins would be congested ; part of the venous blood sent to the lungs through the pulmonary artery would be oxygenated during the first inspiration, but, when the next systole of the heart took place, if any blood passed into the left auricle by the pulmonary veins, it would be venous, and, if thrown *out* by the left ventricle, would act as a poison to the brain, and prevent the respiratory nerves from exciting the muscles of respiration ; thus, together with the pressure on the nerves and arteries in the neck, producing asphyxia. At the same time the blood was prevented returning from the brain, in consequence of the ligature round the veins of the neck, thus producing apoplexy.

I, therefore, removed all pressure from the neck ; encouraged the return of blood by raising the head and chest ; removed the immediate congestion from the lungs and brain, by drawing blood from a vein, and kept that flowing until the muscles of respiration were excited to action sufficiently to allow the air to change the venous into arterial blood, evinced by the activity of the brain. When respiration was established, it was my next duty to relieve the congested state of the brain, which I endeavoured to do by keeping the raised head (which was very hot) as cool as I could, and the rest of the body warm, relieving the congested state of the veins by local bleeding, and stimulating the mucous membrane of the bowels by croton oil. Still the violent convulsive motions continued, which I

think rather tends to point out the immediate cause of death to have been effusion at the base of the brain.

It is generally acknowledged that the quantity of blood circulating within the cranium is nearly the same under all circumstances, and that the pathological condition as to *plethora* consists principally in the want of balance between the arterial and venous, the arterial blood giving the natural stimulus to the nerves of the brain, when sent in due quantity ; the venous, in excess, depriving the brain of that stimulus. My old and respected preceptor, the late Sir C. Bell, says, "The head and neck may be surcharged and bloated with blood, while the brain will preserve its natural condition as to the quantity of blood in its vessels. All qualities of life are maintained through the active circulation of arterial blood in the substance of the organ. The veins of the neck being pressed upon, as by violently turning the head, by inverted position, or partial strangulation, apoplexy is induced. Here it is not an accumulation of blood in the brain, but an interruption and stagnation, which, equally with the rupture of a vessel, influences the brain, and diminishes the nervous energies. On the examination of the brain in such cases, the veins of the brain are turgid to an unnatural degree, accompanied with a corresponding compression of the arterial system. The blood is accumulated in the veins, and the circulation arrested, and the activity of the arteries diminished proportionably ; we see, therefrom, how sense and motion are diminished, and at length life extinguished, without rupture of a vessel. If this condition of the circulation could be with precision ascertained, bleeding from a vein would be preferable to opening the temporal artery." In this case this particular condition certainly existed, and I, therefore, bled from a vein.

I trust that I have now satisfactorily proved that, in asphyxia from hanging, bleeding from the temporal artery would kill by depriving the brain of its proper stimulus ; bleeding from a vein, by taking off the pressure from the cerebral arteries, and relieving the congestion in the lungs, would stimulate the brain, excite the respiratory nerves, and restore animation ; and that no other mode of treatment would be likely to succeed until this has been accomplished.

Prov. Med. Journal, Dec. 23, 1843, *p.* 282.

[Mr. Bree, of Stowmarket, gives the following case in corroboration of the treatment adopted by Dr. Shearman :—]

I happened to be passing a cottage in this town at the moment its occupant, a man about sixty years of age, had been found hanging by the neck from a rope attached to the banisters of the stairs. He was instantly cut down, and at first appeared quite dead. His face was swollen, and black with congested blood, the eyes starting forwards, and the tongue protruding, presented a most horrid spectacle. The surface was cold, and the action of the heart not to be felt with the hand. I did not, however, waste much time in

inquiring about symptoms. I cut up his coat sleeve, applied a bandage, and opened a vein. I then got all the hot water I could obtain, and applied it, by means of a flannel, to every part of the surface I could come at, particularly to the arm in which I had opened the vein. I at first thought all my efforts would be useless, but, by perseverance, I at last got the blood to flow from the vein, shortly after which respiration became partially established, and the action of the heart distinctly felt. I now opened the temporal artery, and took away altogether about twenty ounces of blood, with most decided and permanent relief to my patient. He gradually became sensible as the blood flowed from the vein and artery. He was now put to bed, when, continuing to treat the case as one of congestive apoplexy, I applied sinapisms to the ankles, a blister to the nape of the neck, and directed him to have an active enema. Soon after he was put to bed, however, he became delirious, and required the assistance of two men to hold him. He was now in the condition of a man labouring under *mania from drink*. This condition lasted more or less for forty-eight hours, when it gradually gave way, and the man perfectly recovered, and is alive and well at the present moment. He had been labouring under melancholia, which had caused him to commit the rash attempt at self-destruction ; but he has evinced no symptom of the malady since that time, now between six and seven years.

Now, I think it will be readily acknowledged that our treatment of these cases ought to be decided. There is not a moment to spare, and the first and obvious indication is to relieve the congestion, which *stops the circulation* of the blood. The slightest reflection must convince us that the effect of the ligature round the neck must produce congestion not only of the brain, but of the lungs also. If either one or the other, or both, of these effects, particularly the latter, continue, death must be the inevitable result. Then comes the question, is it most proper to take blood from an artery or vein? My answer to this query would be, get blood from a vein if you can ; if you cannot, open an artery. *But get it by any means you can.*

Ibid. January 6, 1844, *p.* 266.

10.—ON THE USE OF NAPHTHA IN PHTHISIS.

By D. Wilson, Esq.

[It seems, notwithstanding the doubt with which the efficacy of naphtha was at first regarded by the profession, that it at least rises in estimation. We have reason to suspect that many of the cases in which its efficacy was at first so much praised were not really tuberculous affections, but resulted more from chronic disease of the mucous surfaces. The following case, however, shews that it may be highly beneficial in cases which are considered by eminent stethoscopists as tubercular. March, 5, 1843, Mrs. A., aged 27, had been in

close attendance on her husband during an attack of phthisis which had continued three years.]

She had cough, which she said had sometimes left her for two or three weeks, but it always returned again ; while she sat quiet she was pretty free from cough, but on moving about, especially on ascending stairs, she was seized with it and considerable difficulty of breathing. She had no pain and perspired only a little at night on the sternum. She felt a sinking at the pit of the stomach, with weariness, and wandering pains between the shoulders. Her pulse was weak, tongue clean, and her general functions regular. Her strength had declined much of late, and her appearance announced great languor and delicacy of constitution, the form of the chest being flat. She had dark eyes and hair, and a fine white skin. She stated that none of her family had died of consumption. I had ascertained, however, that her father died of that disease. Her mother had also informed me that Mrs. A., about seven years ago, had a severe attack of inflammation of the bowels, and ever since she has been delicate, and latterly, in the winter months, she had observed her to be troubled with a hacking cough. Percussion over the right infra-clavicular space elicited a duller sound than it did over the left side, and the costal elevation and expansion were distinctly limited under the right clavicle. The respiratory murmur over the same space was harsh and tubular, with loud and prolonged expiration ; the same physical signs were well marked in the right supra-scapular fossa. Percussion over the left side, posteriorly, elicited a much duller sound than over the right side, and the respiratory murmur was very weak, being in spots nearly inaudible ; still, on a full inspiration, the vesicular murmur was developed, although imperfectly.

Dr. Hastings examined her also on the 7th of March, 1843, and he, too, pronounced her disease to be phthisis. I afterwards sent her to be examined by two eminent hospital physicians, both authors, and acknowledged stethoscopists. The first wrote as follows :—" I think there is obstruction in the left lung, most probably crude tubercles. March 7th, 1843." The second wrote,—" I find collapse and dullness below right clavicle, with decidedly tubular breath-sound, and voice. There certainly are tubercles at the apex of the right lung. March 10th, 1843."

On the following day I put her under the naphtha treatment, commencing with ten drops, three times a day, which were gradually increased until she took sixty drops three times a day. As this dose caused some cerebral disturbance, the dose was diminished to forty drops three times a day. She came to me once every week, evidently improving. On the forty-second day of the naphtha treatment I again sent her to the physician who last examined her, namely, on March 10th, 1843, he wrote,—" There is still considerable collapse and tubular phenomena, with dulness at the apex of the right lung, but the constitution seems much improved. April 21st, 1843." On May the 8th, 1843, I examined her carefully, and found the collapse at the apex of the right lung much less evident, the costal elevation

and expansion being more free. Percussion produced a clearer sound ; the tubular breathing was less, there being only a little roughness under the right clavicle, with rather loud expiration ; the tubular breath-sound in the right supra-scapular space, had nearly been replaced by a rough vesicular murmur. Percussion posteriorly elicited dulness, which was nearly alike on both sides ; and vesicular respiration, although weaker than natural, was perfectly established in the left lung posteriorly. Altogether her health had improved vastly ; her cough had long entirely left her, and she could ascend quickly a flight of steps without experiencing her former shortness of breath. She expressed herself as being quite well, and wished to abandon the naphtha. As physical signs of disease, however, still lingered, she was persuaded by me to continue her medicine up to the present period. When I minutely examined her on October 3rd, 1843, and could only detect very slightly tubular breathing under the right clavicle, with very little dulness, and the vesicular murmur was very satisfactory in those spaces, where it had been formerly abnormal. She said " I am as well as ever I was in my life."

I had two patients who gradually augmented the dose of naphtha until they took four drachms in the twenty-four hours, but who after a few days were obliged to diminish the quantity. Mrs. A. still continues taking forty drops of naphtha, three times a day, and she always feels better while taking it. She has left it off for a week at a time on two or three different occasions, but she always, about the end of a week, felt worse, being attacked with lowness of spirits and sinking at the pit of the stomach, and shortness of breath. On the second day after resuming the naphtha she feels a decided improvement in her health and a rapid relief from all her unpleasant symptoms. I am anxious that she should continue her medicine whilst any signs of disease remain, although for the last six weeks I think, the physical signs have been stationary, and I believe they will remain so. I am disposed to agree in opinion with Dr. Hastings, who states, at page 114 of his work on Consumption, that he believes the periphery only of crude and enlarged tubercles can be acted on by the absorbents ; the central portion of the unorganised mass, being too far removed from their influence, may, therefore, remain for an indefinite period innocuous, similar to other foreign bodies, surrounded by their cysts. That the preceding views may be correct seems highly probable, and many valuable authorities might be quoted in support of them, but none can be more explicit than Dr. C. J. B. Williams, who, at page 193 of his able work on the " Pathology and Diagnosis of Diseases of the Chest," says, " under treatment and favourable circumstances of air and climate, these symptoms and signs have been gradually removed ; in some cases entirely, *in others partially*, but to such an extent that the patient's health has been considered, in a great degree, restored." And he further goes on to answer sceptics who may question such cases being phthisical, or, if they were so, that the lesions were entirely removed. " I admit this," he says, " but maintain that the existence of phthisis

LIBRARY

was as much proved as it ever can be in its early stage,—that precisely similar cases, when neglected, commonly run a consumptive career, and we are not aware that such a combination of signs and symptoms can be produced but by lesions which essentially have a phthisical tendency."

In almost all the cases of early tubercular disease, wherein I have seen the most rapid effects from naphtha, there has been an early and, in some instances, enormous increase of appetite and an augmentation of weight, as has been noted in a former case of mine, published in the Lancet of June 3rd, 1843, page 343. The odour of the naphtha is frequently to be detected in the urine, which is occasionally more abundant in quantity and of a much darker colour than naturally. Some of my patients have observed the odour in their sputa. Although this occurrence must be liable to some fallacy, still I think in two instances I have been satisfied of the fact from an examination of the sputa expectorated some hours after the naphtha has been taken, and in these two cases there was softening and caverns.

In every case that I have seen, the diarrhœa, so distressing an attendant in the last stage of phthisis, has been effectually checked after a few doses of naphtha. In two very acute cases, however, which are now under treatment, diarrhœa has occasionally come on, but it has hitherto been exceedingly manageable. The profuse perspirations are within a few days almost universally arrested ; however, I have seen them return in cases where there was softening and caverns. Dr. Hastings has justly observed, at page 119 of his work on Consumption, that naphtha, like all other medicinal agents, will occasionally require to be administered with other known remedies. As the early detection of tubercles is of the most vital importance, the early stage being the period when naphtha has been shown to have the most marvellous and permanent effects in phthisis, so in tubercular deposits is the early detection and treatment of scrofulous inflammation which, being neglected, is fraught with the most direful results. In those who lead an intemperate life I have observed tubercular deposition to be very common, as well as the scrofulous inflammation, and both running their course very rapidly. I question whether nature does not often point out to us a lesson in the relief frequently following the spitting of blood ; at all events, when there is pain and tenderness under the clavicles and between the scapulæ, counter-irritation, if not leeching, should be employed. I have seen the best effects in such cases result from naphtha and counter-irritation employed at the same time. To lower and build up the system occasionally at the same period is, I believe, admitted to be sound pathological practice. Counter-irritation would seem to retard the progress of the scrofulous inflammation until the naphtha, alone or combined, has effected a salutary change in the morbid action going on in the system. In two cases I have tested the superiority of naphtha over the ioduret of iron, so highly extolled in the treatment of phthisis. I have also seen the former advantageously combined with tr. ferri sesquichlor., as well as with the

ammon. tart. ferri, where the latter preparations have been of little avail by themselves. Should naphtha in some cases fail, it will only be what happens every day to other well-known valuable drugs employed in other diseases. When Dr. Elliotson pointed out the value of creosote in cases of vomiting, it by no means followed that it would always act as an arrestive, which experience has proved; still no one would be so incredulous and false as to deny its general value as a medicine in cases of vomiting, &c. Why we should wonder and marvel at the therapeutical effects of ten or twenty drops of pyro-acetic spirit, or naphtha, any more than at one drop of hydrocyanic acid, or creosote, I cannot imagine. I would recommend others to try the remedy and judge for themselves; and, in justice, I would urge them to try it early in the disease, and not to wait until they are satisfied of the existence of phthisis, when patients are too clearly expectorating their lungs; or to waste valuable time in the hitherto lamentably unsuccessful routine of practice, and then adopt the naphtha treatment; such a plan of proceeding, I maintain, is not only unscientific but unfair; and to sceptics I would add, that until they have patiently and honestly so tested the powers of naphtha, their opinions must be valueless. Practitioners will discover, if they have not had introduced to their notice a new specific, that in a majority of cases of the earlier stages of consumption naphtha is a most valuable and powerful agent in checking the progress of this terrible disease.

Lancet, Nov. 25, 1843, *p.* 250—253.

[The following extract is from Dr. Hastings's work "On Consumption treated with Naphtha," we give his own words, leaving the conclusion to the judgment of our readers.]

"The reasons which induced me," says the author, "to deviate from that line of medical treatment which has so universally, and for so long a period, been in vogue, for that which I now submit to the profession, was the fatal termination of all cases, whatever was the treatment adopted, during an experience of upwards of twenty years. I was led to the conclusion, from a careful survey of the chemical analysis of tubercle made by Thenard, that it was defective, inasmuch as the composition of the animal matter, which amounted to upwards of 98 parts out of 100, had not been investigated. From the greasy nature of tubercle in its crude state, there did not exist the slightest doubt in my mind that carbon entered largely into its formation, and that its composition had a striking resemblance to fatty matter. In consequence of the loss of fat, so remarkable in the earlier stages of consumption, I determined to employ those compound agents, rich in carbon and hydrogen, which had not been previously used in medicine; not with the idea that they would make up the deficiency, which the system had sustained in the progress of the disease, but that such a change would, by that means, be introduced into the constitution as would act on the forces of the organism, at the point of departure from health, whether that took

place in the stomach, blood, or elsewhere ; that change tending to such an affinity in the elements within the body, that the carbon, hydrogen, oxygen, and nitrogen, instead of assisting in the formation of products which threaten life, would tend to develope those materials only which are required for the perpetuation of health and the prolongation of existence."

"I administer naphtha (pyro-acetic spirit) three times a-day, in doses of fifteen drops for an adult, mixed with a tablespoonful of water, which is proportionally decreased, according as the patient approaches youth. After the second or third day I increase the dose by about one-fourth, regulating its increase or decrease according to the absence or presence of nausea, sickness, or any other untoward symptom arising out of its use. As the disease advances, I increase the dose to forty, and even fifty drops, and administer it four times a-day, instead of three times."

Prov. Med. J., Dec. 23, 1844, *p.* 232.

On the use of Naphtha in bronchial affections.—[Whether or not the opinion of different writers on the use of this medicine in phthisis be perfectly correct, there seems to be no doubt that in many cases of chronic bronchitis which frequently bear a strong resemblance to phthisis it will be found a valuable medicine. A case is related by Mr. Proctor, of Witham, in which, after an attack of acute bronchitis, difficulty of breathing, cough, with expectoration of a well marked purulent character, and nocturnal perspiration existed. There was also great emaciation with occasional hæmoptysis. The following medicine was prescribed

℞ Naphth. Rect. ℥j. ; Liq. Op. Sed. ℥ij. M.

of which he took fifteen drops three times a day, in a little water. The naphtha was continued for about two months when he reported himself well.]

Med. Gazette, Nov. 17, 1843, *p.* 213.

11.—ON TIC DOLOUREUX.

[Sir Charles Bell's mode of administering croton oil in this disease, was sometimes by prescribing powerful doses so as to act energetically on the bowels, in doses of one or two drops at a time : at other times his plan was to mix one, two, or three drops with a drachm of the compound extract of colocynth, and give five grains of this mass with ten grains of the compound galbanum pill at bedtime.

As a safe and efficacious combination of croton oil and colocynth, we would recommend to our readers a prescription of Sir Benj. Brodie, compound extract of colocynth fifty grains, hard soap ten grains, croton oil one or two drops, to be made into twelve pills : of which one may be taken occasionally.

Speaking of croton oil, we may refer to another combination, which is very useful as an external application, and was, we believe, first used by Mr. James Allen, of York. Take of croton oil, and solution of potassa, of each half an ounce; shake them together till they are incorporated. Take of this solution 30 minims, rose water one ounce. Let them make a liniment, to be rubbed on any part night and morning, or even three times a day, till blisters or minute pustules appear.

Dr. Watson refers to the use of *muriate of ammonia* in the treatment of neuralgia. He says]

There is a kind of face-*ache*, which cannot properly be reckoned as a species of neuralgia, for it does not occur in short stabbing paroxysms, nor is the pain acute enough to entitle it to the name of tic douloureux; but which is very common, very distressing, and, under ordinary treatment, sometimes very intractable. It is called by some a rheumatic pain; it occupies the lower part of the face, the jaw principally, and the patient cannot tell you exactly whereabouts it is most intense. It is often thought to proceed from toothache, and bad or suspected teeth are extracted, but with no good effect. Now I allude to this, for the sake of saying that, some years ago, I was instructed, by an experienced old apothecary, that this face-ache may be almost always and speedily cured by the muriate of ammonia; a medicine that we seldom give internally here, although it is so much used in Germany. And I have again and again availed myself of this hint, and been much thanked by my patients for the good I did them with this muriate of ammonia. It does not *always* succeed; but it *often* does. It should be given in half-drachm doses, dissolved in water, or in almost any vehicle, three or four times a-day. If the pain does not yield after four doses, you may cease to expect any benefit from it. In two or three instances of a similar kind that I have recently had to treat, I have found the iodide of potassium, in doses of five or six grains, work a speedy and permanent cure. This induces me to suppose that the pain, in some of these cases, is periosteal—I so judge from the ascertained efficacy of the iodide in other periosteal affections attended with pain.

Prov. Med. J., Oct. 28, 1843, *p.* 75.

M. Ducros recently communicated to the Academy the details of some well-marked cases of this distressing disease, which were rapidly cured by the use of strong ammonia, applied to the palate, gums, &c. with a camel-hair brush, so as to occasion a profuse discharge of tears and saliva. He requested the physicians of several of the metropolitan hospitals to repeat his experiments on a large scale; and the results of their trials have been, he says, must satisfactory.

(The strong aqua or liquor ammoniæ, taken internally, will be found to be a most valuable remedy in many cases of neuralgic suffering about the face and head, odontalgia, severe nervous head-

ache, &c. The best mode of administering it is to mix from 20 to 40 drops in a cupful of very thick gruel, and to take this at bed-time, or whenever the paroxysm of pain is present. The ammonia must be well blended with the gruel, else it will irritate very painfully the inside of the mouth and throat. It should produce a profuse salivation and lachrymation. In very severe or obstinate cases, it may be applied outwardly at the same time.)

Med. Chi. Rev. Jany., 1844, *p.* 236.

[The carbonate of iron prepared extemporaneously is strongly recommended by Mr. Mac Donogh. The formula is as follows :—]

℞ Sulph. ferri. gr. xv.
Carbon. potass, gr. xxv.
Aq. rosæ, ℥viiss.
Syrupi. Aurant. ℥ss. M. ft.
Mist. capt. coch. ij ampl. ter quotidie.

Med. Times, Ap. 6, 1844, *p.* 20.

[Dr. Henry Hunt in his work on Neuralgic Disorders refers particularly to the use of arsenic.]

Arsenic, he observes, operates most favourably on persons who are of lax fibre, accompanied by a languid state of the circulation, and whose secretions are rather profuse than otherwise ; the urine pale and plentiful, and more especially on those whose skin is cold and moist. In persons of this description, whilst arsenic, to an extent far beyond other medicines, relieves the neuralgic pain, it improves the general health, and gives firmness and vigour to the constitution. When the urine is of a deep colour and scantily secreted, or when it deposits the lithate of ammonia, the tongue loaded, especially if the tip or edges of it are red ; arsenic almost invariably disagrees, and aggravates the pain. But as this morbid state of the system frequently depends on, or is complicated with, disorder of some important viscus ; arsenic will often agree, and relieve the neuralgic pain, after the visceral disorder has been removed by appropriate remedies. Arsenic is a peculiarly appropriate remedy for neuralgia, arising from malaria, especially if it be strictly of an intermittent character ; indeed, most cases of neuralgia, in which there is distinct and regular intermissions of pain, from whatever cause the disease may have arisen, are likely to be benefited by the class of remedies, of which arsenic is the type of the mineral, as quinine is of the vegetable ; with the proviso, that the system is in a state fitted for the reception of them.—When neuralgia is associated with some morbid action in the spine, with anæmia ; or arises from injuries of nerves ; or local irritation of nerves by diseases or unnatural growth of bone ; or if it be complicated with engorgement of the liver and other viscera ; arsenic is usually injurious, and I believe, seldom useful.—During the exhibition of arsenic, the use of fruit and every kind of acid should be interdicted, otherwise from the griping, pinching pains in the bowels and diarrhœa, which they are apt to produce, it will be found neces-

sary, occasionally to omit the medicine. In cases, where it has been found requisite to prepare the patient by purging and the use of calomel, arsenic will operate more easily, if a grain of calomel, for a few successive nights, or an occasional aperient be given with it.

Dr. Hunt recommends that at first from two to four minims only of the liquor potassæ arsenitis should be given three times a day, combined with double the quantity of the compound tincture of camphor, and if acid be present, with a few grains of bicarbonate of potash; an additional minim of the arsenical solution to be added daily until some effect is produced. The arsenic may then usually be continued for a few days without further increase of the dose, and when the neuralgic pain is diminished it may be omitted altogether. It will, however, generally be necessary to resume the medicine, as the pain not unfrequently returns, when it should be again commenced in the same small doses as at first. The author has met with several cases of neuralgia in which the disease resisted the effects of arsenic in solution, but yielded when the medicine was given in the solid form. In such cases, he recommends the arsenic to be given in doses varying from one twentieth to one tenth of a grain, well ground in a mortar, with a little black pepper, and made into a pill with a crumb of bread. It is obvious that when administered in this way the greatest care is required in the preparation and division of the medicine, as an error in either might readily lead to fatal results.

The treatment of neuralgia by arsenic seems to require much patience and perseverance on the part both of patient and physician, and many months not unfrequently elapse before the disease is entirely subdued.

Prov. Med. J. April 3, 1844, *p.* 12.

12.—ON IMPENDING DISSOLUTION IN YOUNG INFANTS.

By Richard Doherty, M.D., Honorary Member and Secretary of the Dublin Obstetrical Society.

[There are three modes whereby, according to Professor Alison, sudden death may occur, viz., Death commencing at the Brain; at the Lungs; and at the Heart. In an admirable paper by Dr. Doherty the same phenomena are shown to take place in new born infants.]

Death, commencing at the brain, may be induced in two ways; firstly, as in compression, when the respiratory function is the first to suffer; and secondly, as in concussion, when the heart's action is directly arrested. The first mode, or that by coma, is frequently a cause of children being still-born; and, as in individuals of a more advanced age labouring under apoplexy, there is venous turgescence, bloated features, slow and impeded respiration, so in the infant, which has so suffered, those peculiarities are observable. It is quite a common circumstance, for the face, when expelled, to assume a purple hue; which colour, if the labour be quickly finished, soon

disappears : but if from delay or any other cause the return of the blood from the head be prevented, the external engorgement continues to indicate a similar condition within the cranium, and, although when delivery is completed the heart continues to beat for some time, respiration is with difficulty, or not at all established. The same consequences may be induced if the head be subjected to long-continued pressure from the action of the uterus, or squeezed through the outlet of a narrow pelvis ; and they not uncommonly result from the compression produced by the forceps. After recovery from the immediate effects of this condition, a congestion of a minor degree may persist, giving rise to convulsions, or paralysis, if the proper remedies for its removal be not adopted.

[Thus if we find a child born with its face of a purple colour, bloated features, and slow or totally impeded respiration, we suppose it to be owing to compression of the brain, and by allowing the cord to bleed a little, or applying a leech or two to the head, we frequently relieve the venous turgescence and the child breathes more freely. It is of the greatest consequence in a practical point of view to distinguish this kind of case from one of *concussion*, in which one great symptom is that the child is born *pallid* and relaxed in its limbs, &c. ; or, in the words of Dr. Doherty, concussion "seems the mode of death when the fœtus, having been exposed to strong uterine action, or its head driven with shocks against resisting points, such as incurvated spines of the ischia, is at length expelled, *of a pallid hue*, with relaxed limbs, and the cord pulseless, or beating feebly ; and also in cases of breech-presentation, when in consequence of powerful efforts to withdraw the head, injury is inflicted on the spinal marrow. It will be perceived I do not now allude to cases, in which the child is born delicate in its nature, but I refer to those, by no means rare, wherein, although, in consequence of the mother's account of the strong motions she has felt in her child, and the loudness of the fœtal pulsations, before the commencement of parturition, we had every reason to expect the birth of a vigorous infant,—yet owing to a tedious or a violent labour it comes forth, pale in colour, of a low temperature, and if not quite dead, makes but puny efforts at respiration. Such cases, I think, illustrate this consequence of injury to the nervous centres ; and if the proper mode of assistance be not rendered, they quickly prove fatal from exhaustion, or become the subjects in a short time of spasmodic action."

In such cases it is evident that blood letting must not be resorted to in the first instance.]

The warm bath, at a high temperature, not continued, however, too long, as it would then tend rather to depress the powers of life, frictions to the surface, ammonia applied to the nostrils, mustard to the feet, and the injection into the stomach of a little wine whey, to which a few drops of ether have been added, must constitute our immediate resources. In throwing into the abdomen a stimulating fluid, there is one point we should recollect, that too large a quan-

tity may act injuriously, by preventing the descent of the diaphragm. A want of unanimity exists amongst authors as to the best mode of employing water for the resuscitation of still-born children. My own opinions I cannot better express than by quoting the following passage from M. Hall's last work. "The most important of all our remedies in congenital asphyxia is the sudden and forcible impression of cold water on the face and general surface. The quantity of the water should not be great, but it should be applied suddenly and with force. The temperature should not be lowered; on the contrary, the dashing of the cold water should be alternated with a warm bath, succeeded by warm flannels. These too may be applied briskly and suddenly. The efficacy of the remedy is in proportion to the suddenness and the energy of the alternation.—The infant may be placed in a warm bath, and be afterwards rubbed with warm flannels. The sudden dashing of cold water will then especially be doubly efficacious." In these directions, which have my fullest accordance, Hall differs from Edwards of Paris, and Schöller of Berlin. But independent of having witnessed the best effects from this mode of treatment, I consider I am justified, even in a theoretic point of view, in rejecting, as inapplicable to the present subject, Edwards' excellent experiments, whereby he demonstrated, that an animal in a state of asphyxia will die much more readily, if immersed in hot, than in cold water; because, as I shall just now show, the still-born condition is markedly dissimilar from that of asphyxia, though nominally called so. The propriety of cutting the cord under such circumstances constitutes another point, upon which there is a discrepancy amongst writers. Observation leads me to side with those, who think, that once the funic pulsations have ceased, the cord can be no longer of service, but will only inconvenience us in employing the bath, and other appropriate remedies. I place no reliance on the possibility of the circulation recommencing at the placenta, for which Chaussier contends; nor can I agree with Baudelocque that the blood still flows through the vein, although the arteries may have ceased to beat. In both classes of cases, and particularly in the latter, wherein the heart's action directly fails, it may be necessary, from the delay in the establishment of natural breathing (which we know is an agent in effecting a circulation of the blood), to resort to artificial respiration, but it is a measure, which should be reserved for a last resource, and never adopted until other means are evidently inadequate. I have seen in such instances, benefit result from passing shocks of galvanism through the cardiac region; however, it is very seldom that remedy can be made available, as the apparatus will rarely be at hand at the moment. It often becomes necessary even in these latter cases, for instance, where a tendency to convulsions is manifested, to apply a leech to the head, before the circulation will become adjusted; but it should be at a comparatively later period, and accompanied by the use of stimulants to support the vital powers.

The term Asphyxia, as applied to impending death in new-born

infants, has been very generally misused. We constantly hear of children coming into the world in a state which is so designated; but this is manifestly incorrect. The word, in its proper pathological signification, only implies a condition, the consequence of a cause, which directly arrests the supply of pure air that should enter the chest. Now, in the fœtus at birth, no such cause exists under ordinary circumstances. The child is then surrounded by an atmosphere of healthful quality, whose ingress is prevented by no mechanical impediment; and breathing, if it remain unaccomplished, is so, not from any fault in the lungs and its appendages, but from a defect in the stimulus of nervous influence, upon which the muscular actions constituting respiration depend; and for this reason we should, as I have observed, resort to other measures, rather than artificial inflation, in the first instance. There is this difference too, which has not been alluded to by writers on this subject, to be observed between a child still-born, and a person of more advanced age, who has fallen into asphyxia, namely, that the latter has been accustomed to the circulation of arterialized blood, while in the former, that fluid has never, as yet, been perfectly decarbonized. In the adult, the chain of events by which death is induced, when it commences at the lungs, may be stated to be: firstly, a suspension of the respiratory function, while the heart's action continues; secondly, (the circulation being thus maintained), the contact of venous blood with the nervous centres, by the deleterious qualities of which their sensibility is depressed; and thirdly, a stagnation in the lungs, through which such blood soon ceases to be transmitted. It is evident, under these circumstances, life may often be preserved, if we reverse these conditions by substituting for natural inspiration an artificial current of air, by which there may be effected in the pulmonary tissues those changes in the blood necessary to enable it to traverse them, and by which it may be purified of the noxious constituents that are acting as a poison on the system. By thus temporising, an opportunity, which speedy dissolution would otherwise deny, is afforded for the employment of remedies capable of removing the comatose condition, and in this way the vital principle may be resuscitated and sustained. But in the child which has never breathed, things are differently circumstanced. In it the nervous apparatus has not yet been supplied with blood which has undergone the process of aëration; for although some alteration is certainly produced in it, by the action of the placenta and fœtal liver, and perhaps the thymus gland, during intra-uterine existence, it preserves throughout those characters, which are denominated venous, and "both in the arteries and veins, differs in no perceptible respect from the venous blood of the adult." In the child still-born, therefore, it is not necessary to take into consideration, as an element in the production of a fatal event, the destructive effects of black blood, if conveyed by arterial vessels, so apparent in after-life; (otherwise there could never be such an occurrence, as the unaided revival of an infant, twenty-four hours after being laid aside for dead); and on that account the circumstances are

not so urgent as to require us to immediately adopt measures for its purgation, by beginning our efforts for restoration at the lungs, but they should be directed rather to the brain and its peripheral extremities, whose blunted sensibility is the cause of non-performance of respiration. Then, indeed, it may be useful, if breathing be delayed, to blow into the lungs, as experiment has proved, that expansion and contraction of the chest, and the vital actions consequent thereon, directly aid in the circulation of the blood. But this process, at such a time, may be aptly compared to touching the pendulum of a clock, which has been wound up, but still remains at rest ; it gives the impetus, whereby the machinery—ready to maintain its own actions, once it is set a-going—is thrown into motion; whereas, to *commence* with artificial inflation would more resemble making the pendulum vibrate, before the other parts of the apparatus are in a condition to perpetuate the movements thus begun. I dwell on this point, because I believe that the latter mode of treatment is much more frequently adopted than it ought, owing, in a great measure, to the term asphyxia being thus incorrectly used—an error, which may probably be attributed to the fœtus before birth being immersed in a fluid ;—and I have no doubt, that injury is often, by this operation, inflicted on the texture of the lungs, so delicate in infancy.

One of the chief defects of artificial breathing is, that in it the chest is expanded by the pressure of the injected air, whereas, in natural breathing, the air enters in consequence of its spontaneous enlargement. But, besides the local injury which may be thus done, I am confident resuscitation is in many instances actually arrested by resorting to mechanical insufflation, instead of being aided thereby ; for Leroy d'Etoiles has shown by experiment, that although inflation of air into the lungs after submersion, is one of the best remedies for restoring life, still if it be not managed with great skill, restoration may be prevented by the very means used. Whatever be the remedies we feel ourselves called on to employ, they should be assiduously persevered in, as wonderful recoveries are sometimes made, even after all reason for hope has apparently vanished.

Death commencing at the lungs, therefore, or what should alone be termed asphyxia, is *not* of frequent occurrence in young infants. It is principally observed in the event of a woman, either accidentally, or by design, overlaying her child, or from its birth taking place unperceived ; an occurrence, I would observe, peculiarly liable to happen during the stupor which attends puerperal convulsions. The relaxing treatment adopted in this complaint, renders the soft parts so yielding, that the fœtus sometimes slips away, without almost an effort on the part of the uterus.

We should remember, that in cases of suffocation the heart retains its irritability for some time after the circulation has ceased, and we should not, therefore, be dissuaded by that circumstance from resorting to artificial respiration, and diligently employing other means for restoring suspended animation. Convulsions, if

they occur during, or after the struggle for life, will require to be treated by local depletion, and the other measures already pointed out.

When an infant comes into the world, the mouth and pharynx are generally clogged by mucosities, which, if not removed, may impede the entrance of air, and produce asphyxia. The same consequence sometimes results, as first pointed out by Hérodoldt of Copenhagen, from the trachea and bronchial tubes being filled with liquor amnii, a fluid that the observations of Leclard tend to prove is actually respired, instead of air, by mature embryos.

Such cases require the careful removal of whatever mucus may be within reach, either by the finger, or more easily, according to Gardien, with a pledget of lint dipped in a solution of common salt. When the trachea is blocked up, it is proposed by Schéele to withdraw the fluid by means of a flexible tube, to which a pump is attached. A more feasible method is to keep the head dependent, rub the thorax, and, if these measures fail, we may administer a gentle emetic. After apparent recovery, they must be carefully watched, lest they fall into what may be termed secondary asphyxia.

But there seems yet another mode, in which death, commencing in the respiratory organs, may be produced in the young infant. As death beginning at the brain results from tedious labour, so a birth of unusual rapidity may be the cause of death, commencing at the lungs, apparently by not giving them time to prepare for the performance of their new function. We are indebted to Joerg of Leipsig, for first pointing out the injurious consequences to the child of too speedy a delivery. He conceives that in such cases, in consequence of the inferior degree of compression to which the placenta is subjected, a sufficient tendency is not given to the foramen ovale to close, nor is a necessity for respiration felt by the system. After birth then, a portion of the lungs alone becomes filled with air, while the remainder continues in a fœtal state, a condition to which he has given the name of atelektasis, and which may, amongst other ill consequences, give rise to apoplexy, depending on the want of duly oxygenated blood.

In cases of this kind, and indeed in all, there is one general rule to be observed, never to tie the cord as long as pulsation exists in it, until respiration is well established ; and never to rest satisfied in any case, until the child by its loud cry, the "vagitus intra muros" of the Scotch law, convinces us that its lungs are fully able to perform their function. At a later period, in instances such as those I have recorded, our treatment must consist in the use of stimulants internally and externally, together with remedies directed against the apoplectic and inflammatory consequences to which the brain and lungs are both liable. In detracting blood from the chest, the best situation to apply leeches is under the axilla, as the subcutaneous venous plexus there communicates directly with the vessels of the thoracic cavity, a remark which has been made by Billiard.

Instances we sometimes see, in which, after birth, the heart of

the child is laboured and tumultuous in its action, and apparently oppressed by the blood that flows upon it; and, in such cases, congestion of the surface, convulsions, and even death may ensue. They probably arise from a *tendency* to closure of the former channels not being established (for it does not appear necessary they should be actually closed for some days), or from a feeble condition of the heart itself. The same symptoms are often, in the hands of inexperienced attendants, induced by applying a ligature to the cord the moment the first gasp is observed, and before the respiratory function has come sufficiently into action to open a new course for the circulation. They require leeching over the cardiac region, &c., for their removal. But syncope, or death commencing at the heart, in the newly-born as in the adult, is best exemplified by the effects of loss of blood. Hæmorrhagic discharges from the uterus during gestation or labour, may, it is well known, be a cause of death and premature expulsion to the fœtus, or of deficient vitality in the child at birth, even if carried to the full time. We are not to suppose this result is produced by a direct detraction from its system; for experience proves these beings, though in such close coaptation, to possess circulation so independent of each other, that although the parent may bleed even to the extinction of her life, the fœtal vessels are not thereby deprived of their contents; a fact first demonstrated by Wrisberg in his experiments on cows in calf.

To syncope we may, with much probability, assign the imminent danger which impends over the fœtus, when it presents by the feet. Under such circumstances, it is apparent the cord is very liable to suffer such compression, as will instantaneously put an end to the transmission of blood through it; even more so, than when the head being engaged in the vagina, the pelvis is sufficiently roomy to permit a coil or two of it to prolapse. Now, the consequence of the funic circulation being suddenly annihilated, must be, that the supply of blood to the left side of the heart is at once cut off, just as if in the adult the pulmonary veins were rendered impervious, and those cavities, continuing to contract, speedily empty themselves of their contents, and are then disabled from maintaining any longer the normal amount of pressure on the brain. While, though the escape of blood from the system is at the same time equally arrested, the vis a tergo being no longer in action, the capillaries do not become sufficiently distended to give more than a livid tint to the surface. The child at birth, therefore, presents all the appearances of a deep faint; and on opening such bodies, the blood is found to have deserted the left side of the heart, and accumulated in its right cavities and the great trunks. But we have already seen that in other cases of funic presentation, the infant exhibited all the signs of congestion. Those were instances in which, from the cord being subjected to only a moderate or an intermitting force, its pulsations could be felt in the vagina becoming more and more laboured, until they ultimately ceased. There seem

then to be two modes whereby compression of the navel-string may prove detrimental to the fœtus ; firstly, resulting from a total obliteration of its vessels, an almost instantaneous suspension of life, beginning at the heart ; and, secondly, a comatose condition, slower in its approach, having its seat in the brain. In the same way, too, it would appear, that artificial delivery of a footling, if not dexterously performed, is fraught with a double danger to the child. Attempts at extraction, made at an improper time, may be attended by a perilous failure of the heart, and from force, indiscreetly applied, may arise a concussion of the spinal marrow, equally deplorable in its results.

But death, having the heart for its salient point—as indicated by paleness and collapse of the countenance, cold extremities, pulse becoming gradually imperceptible, while respiration continues to the last—is still more plainly exemplified by cases wherein, either from inattention at the birth, bleeding from the cord occurs, or when the same accident attends ulceration at the umbilicus, after the navel-string has dropped.

The treatment such cases will demand, whether attended or not by convulsions, will be similar to that, which, under parallel circumstances, would be required in the adult ; the observance of the horizontal position, the application of heat, and the use of stimulants (with opiates in some instances), and of appropriate sustenance, being the chief indications.

Dublin Journal of Medical Science, March, 1844, *p.* 68.

13.—ON THE DIAGNOSIS IN CASES OF PARALYSIS OF THE FACE.

By Marshall Hall, M.D., F.R.S., &c.

[It is of the greatest consequence in practice that we distinguish between hemiplegia of the face and paralysis of the facial nerve, and of this latter as it occurs *within* and *without* the cranium.]

I had recently, says Dr. Hall, an urgent summons in such a case. The patient was situated in a lunatic asylum, a circumstance which rather disposed the mind to expect *cerebral* disease. Besides, the patient complained of pain of the head at one time, and was apparently drowsy at another. The face was drawn exceedingly to the right side. In the first place I desired the patient to close the eyelids ; the right eye remained open. In the second place I inquired whether the arm or leg were affected, and found that they were not. In the third place, I begged the patient to put out the tongue ; it was protruded in the direct mesial plane. In the fourth place, I inquired where the patient had been sitting, and we went up stairs and placed the chair near the window, precisely as it had been occupied the day before ; it was placed so as to expose the right side of the face to the draught from the window, which, with the door of the room, which was just opposite, had been open whilst the patient had been engaged in sewing. The weather was autumnal.

Taking these facts together, I did not hesitate to declare that the case was one of paralysis of the facial nerve ; in hemiplegia the eyelids of the affected side can always be closed, though not so firmly as those of the other side. In so severe a case of facial hemiplegia the limbs are almost certainly paralysed, and the tongue is generally affected and protruded to the affected side. Still a question was raised, whether this nerve was affected *within* or *without* the cranium ; there was pain of the head and drowsiness. Now, the portio dura and the portio mollis of the seventh pair (the facial and the auditory) are placed so immediately together within the cranium that it is scarcely possible for one of these nerves to be affected without the other ; *yet there was no deafness.*

I remained therefore of opinion that the case was one of paralysis of the facial nerve, external to the cranium, confirmed, as it had been, by the fact which I had almost anticipated, of the special position and exposure of the patient as she had sat sewing in her bedroom. The issue has proved my opinion to be the just one. No affection of the cerebrum has occurred, and the facial paralysis is gradually subsiding under the usual local remedies, viz., leeches, fomentations, sinapisms, &c.

But the first effect of such partial exposure to cold is sometimes paralysis, whilst a more remote effect is undue action. I may illustrate this principle by a most interesting case of *spasmodic tic*, interesting in many points of view. It is given in the form of a letter, written to an eminent authority on this subject :—

" Dear Sir,—I saw Lady —— ——, now Lady ——, before a recent visit to Switzerland, and I have this day, after my return, seen the correspondence between you and Mr. ——, of——, on her ladyship's case.

" There has certainly been some misapprehension of this case, for Mr. —— speaks of the ' affection having *shifted* from one side of the face to the other ;' and you say ' there is certainly a degree of *weakness* of the portio dura of the *left* side.' Now, I believe there has never been a change of the side affected, and that it is not the portio dura on the *left* side which is weakened, but that of the *right* which is irritated, so producing spasm. This view I will explain :—

" The probable cause was exposure to a severe cold wind. When the affection first took place, the face was drawn towards the left side, but the eyelid of the right was paralysed, the eye requiring the application of the finger to close it, and being more open than the left, the left being in its natural state. After a time the face was drawn to the *right*, and now the *right* eye, which gaped before, became *less open* than the left, but the *left* was *still* in its *natural* state.

" In a word, the change was from *paralysis* to *spasm*, but it was of the same side—*always* the *right ;* and now it is not *weakness* of the *left* portio dura, but *irritation* of the *right*. The *right* eye was always *morbidly* affected, first by *paralysis*, now by *spasm ;* the *left* has *always* been *natural*. The *sensibility* has always been *unaffected*. At this

time everything is *spasmodic*, and that of the right side of the face. The right eyelid is usually more closed than the left, and when closed by an act of volition it is drawn a little awry (to the right), and during laughing it is spasmodically closed without an act of volition.

"The whole right side of the face is spasmodically drawn to the right on laughing, or speaking, or *eating on the right* side of the mouth, and a *new dimple* is *formed* on the right side of the chin. All is normal on the *left* side, which is only drawn a little by the spasmodic action on the *right:* the *eyelid* is *natural*, and mastication is naturally performed on this side, except from the decayed state of the teeth. It is plain that, whatever the cause might be, and I suspect it was exposure to severe cold, it first induced that change in the portio dura of the right side which produced paralysis, and which, being *diminished*, is now characterised by spasm. It is the *right* and not the *left* side, therefore, to which our remedies must be applied, if applied near the motor nerve immediately or remotely the seat of the disease.

"I have seen several cases beginning with paralysis and proceeding to spasmodic affection of the portio dura of the same side. I have also seen *one* unequivocal case of paralysis affecting successively the portio dura of both sides, after an interval of several years.

"I am, dear Sir, yours, &c.

"MARSHALL HALL.

"Manchester-square, September 20, 1840.

"To —— ——."

From the misapprehension in regard to this affection, to which I adverted in the above letter, the remedies were actually prescribed to be applied to the unaffected side of the face!

This patient married, became pregnant, and miscarried with convulsions about the eighth month. It was then asserted, but without the shadow of a reason, that the facial paralysis had been of cerebral or intracranial origin; but it *was* certainly an affection of the *facial nerve*, and there had been no *deafness*, and there was no post-mortem examination; so that there are positive and negative facts which militate strongly against such an opinion, and the only positive fact which might have been adduced in favour of it was neglected. The puerperal convulsions were, therefore, a sad coincidence, but a coincidence merely, with this paralysis of the facial nerve of external origin.

No case can display more lucidly the importance of the diagnosis in question—a diagnosis which at once suggests the proper remedies and the prognosis; and in no case are these questions more important in themselves. The questions whether we should deplete the system, or treat the affection as one of local origin, and whether that affection involves danger to life or limb, are surely most momentous.

It is well that other nerves, motor, and sentient, are not, like the facial, exposed by a course near the surface to the paralysing influence of cold. I have seen a case of paralysis of the sentient nerves of the face, arm, and leg, of the right side, involving peculiar symp-

toms, and not easily distinguished from hemiplegia, proceeding from such a cause ; and Larrey speaks of cases of paralysis induced by exposure to intense cold during the campaign in Russsia. But the discussion of this subject must be postponed to another opportunity.

P. S. Since these remarks were written I have again seen the case first sketched ; the *paralysis* is much diminished, but a little *spasmodic* affection has taken its place.

Lancet, March 30, 1844, *p.* 38.

14.—ON THE DIETETIC AND MEDICINAL TREATMENT OF GOUT AND RHEUMATISM.

By Robert Bentley Todd, M.D.. F.R.S, &c., &c.

Three objects demand especial attention in the treatment of the gouty diathesis. First, to invigorate the digestive organs, and prevent the under formation of free acid (lactic acid) in the stomach. Secondly, to promote the elimination of the gouty matter, through the various excretions. Thirdly, to obviate the tendency to the formation of lithic acid.

It is, however, a narrow view of this important subject which would refer a lithic diathesis simply to the influence of food, overlooking that which I have called a fundamental axiom in the physiology of nutrition, namely, *that the blood is fed from a two-fold source*, from the chyle, and from the disintegration of the tissues, or, what Dr. Prout calls, their secondary destructive assimilation. Magendie, and, perhaps also, Wilson Philip, have erred in this respect ; for they have looked only to one source of lithic acid, namely, to the chyle furnished by the food ; and they have disregarded entirely its formation by a secondary process. Liebig, on the other hand, has attended exclusively to the secondary formation of lithic acid, and denies altogether that the food has any immediate share in its production. He affirms, indeed, that non-azotized food favours its appearance in the urine by interfering with the action of that agent (oxygen) which causes the decomposition of lithic acid into urea.

If it be admitted that lithic acid can be formed from the decomposition of the albuminous tissues, there can be no good reason for denying that it may be likewise derived from an excess of the albuminous matter of the chyle taken into the blood, beyond what is required for the nutrition of the tissues.

The truth appears to be, that the development of this substance may take place from the imperfect assimilation of the food, quite irrespective of the ulterior changes in the system ; or it may occur from certain changes in the system, whatever may be the nature of the food. Of these facts it is most important that practitioners should be fully cognisant. How constantly do we find that a full meal, of whatever nature, produces a copious development of lithic acid, or that a single indigestible substance, in even a moderate meal, will have the same effect ! And this excess shows itself in

the urine excreted within a few hours after the meal,—a space of time too short to warrant the supposition that it is derived from the metamorphosed tissues ; in other words, it seems most improbable that a temporary indigestion could within two or three hours so accelerate the metamorphosis of the muscular and other albuminous tissues, as to give rise to the excretion of so much lithic acid. Indeed, the distinction, which has long been made by practical men, between the *urina cibi* and the *urina sanguinis*, (the former always exhibiting more proneness to deposit,) indicates, at least, that the indigestion of food has a certain immediate influence upon the urinary excretion.

How frequently, on the other hand, does it happen that the slow and silent progress of some deep-seated malady will induce a development of lithic acid to an enormous extent, quite irrespectively of the food taken ; in no class of cases is this more conspicuous than where there is chronic disease of the liver.

The most remarkable example of this kind that I ever saw was in the case of a gentleman, aged sixty, of robust frame, and all his life of the most active habits, who had never previously suffered from disease of any kind. In the month of August, this gentleman began to pass lithic acid gravel, with a little bloody urine ; he complained of slight pain in the back, corresponding to the base of the right lung, whence the breathing was not quite so clear as in the opposite side. This pain yielded to local treatment ; but he went on from this time until his death, passing enormous quantities of lithic acid, both as the amorphous deposit of lithate of ammonia, and in the shape of grains and pisiform masses of pure lithic acid. He gradually emaciated to the most extreme degree, without exhibiting any symptom which could give a clue to the more accurate determination of his disease ; his sole complaint was of weakness, and of occasional pain in the right side, slightly impeding the action of the diaphragm. His countenance assumed all the characters of malignant disease, and he died in about eight weeks from the commencement of his illness. Unfortunately, I could not obtain an examination of the body ; but Dr. Bright, who frequently saw the patient, agreed with me in viewing it as an instance of deep-seated malignant disease, probably affecting the base of the right lung, or the diaphragm.

In another case, I was led, by the long continuance of similar lithic deposits, unaffected by changes of food or medicine, to search for malignant disease ; this was in an hospital patient, a woman of fifty years of age. For some time she manifested no symptoms but emaciation, slight pain in the back, and copious lithic deposits of the amorphous as well as granular kind. When emaciation had greatly advanced, I was enabled to feel a hard deep-seated tumour, connected with the head of the pancreas, or the Spigelian lobe of the liver ; and the coming on of jaundice shortly before her death, confirmed my suspicions as to the seat of the tumour.

In the eleventh volume of the *Medico-Chirurgical Transactions*, the late Mr. Earle relates some cases which show that irritation of

the kidney from disease of its substance, or in neighbouring parts, may give rise to an increased secretion of lithic acid.

The conclusion respecting diet, which a fair and candid review of all the phenomena of nutrition, and of disease, would lead us to adopt, is, that that diet least promotes the lithic acid diathesis, which is most easily assimilable. Small quantities of animal food, which should be regulated by the physician according to the necessities of each individual, with smaller quantities of vegetable food, appear to answer to this description, and especial care should be taken to avoid those saccharine and other vegetable products, which may be prone to the acetous fermentation, and may therefore favour the development of lactic acid in the stomach and duodenum.

Recent chemical discoveries appear to me to simplify greatly the solution of the question respecting diet. From these it appears, that bread, and the ordinary vegetables in use in temperate climates, contain the same azotized nutrient principles as animal food, and are therefore, of themselves sufficient to support nutrition. But to obtain the same amount of nutrient material, the ingestion of a much larger quantity of food is necessary, than of animal ; and in the latter there is much less complication of indigestible matter than in the former. Hence there seems good reason for adopting the opinion, that an animal diet, *regulated as to quantity*, is that most likely to conduce to the establishment of a healthy digestion.

Treatment of the Paroxysm of Gout.—Our object is to relieve the sufferings of the patient as speedily as possible, without interfering with the proper elimination of the gouty matter. In the selection of means we must remember, that in most cases, the gouty paroxysm tends to a spontaneous cure, and is in itself a means of eliminating gouty matter from the system. "These facts should lead us to be cautious ; *first*, As to depressing the system too low, and so, by impairing nutrition, favouring the development or accumulation of new gouty matter ; and, *secondly*, As to ascribing to remedies, that which the natural progress of the malady has effected."

Moderate purging is very useful. Drastic purgatives must be avoided ; as by irritating the intestinal canal, gouty matter might be attracted to it from the external parts. The most suitable medicines of this class are blue pill, and salines, such as Epsom salts, to which an antacid may be added.

Dr. Todd believes, that much of the discredit attached to colchicum, is to be traced to the careless and indiscriminate manner in which it has been employed. He therefore suggests for the guidance of practitioners, the following

Rules for the Use of Colchicum in Gout.

1. Colchicum should not be given in the asthenic form of gout.
2. Colchicum should never be given at the onset of a paroxysm, nor until the bowels have been duly acted upon by mild purgatives.
3. The first doses of the medicine should be very small ; they may be gradually increased.

4. Colchicum should be always administered at first uncombined with any other medicine, until the practitioner has satisfied himself that it is not likely to disagree with his patient. And indeed there is always a disadvantage in administering this medicine in combination with others; since it may become difficult, if not impossible, at times, to determine what effects should be ascribed to the colchicum, and what to the other ingredients.

5. It should not be administered so as to excite nausea, vomiting, or purging. These effects should be regarded as indicative of the unfavourable operation of the medicine.

6. Colchicum may be regarded as acting favourably, when, under its use, the urine is increased in quantity, a more abundant bile is discharged; when the fæces, though solid, are surrounded by mucus, and the skin secretes freely.

7. The effects of colchicum should be carefully watched, as, like digitalis and other medicines, it is apt to accumulate in the system.

The use of this medicine seems chiefly applicable to the sthenic form of gout, which occurs in robust constitutions, and in the prime of life; but it is almost inadmissible in persons advanced in years, who have had several attacks, and in whom the malady would seem too deeply rooted, to be influenced by the temporary administration of this remedy.

In the Rheumatic Diathesis.—If the joints suffer much, they may be best treated by local stimulation, or counter irritation. A strongly stimulating terebinthinate liniment is often beneficial; but, on the whole, nothing is so useful in chronic rheumatic states of the joints as blisters applied in rapid succession. In some instances where there have been much pain and swelling, the application of a few leeches will almost always do good. I learn from Mr. Busk, who has had great experience in the treatment of those painful articular affections connected with gonorrhœa, (gonorrhœal rheumatism,) that blisters are an invaluable remedy in them, even from the first, and this accords with my own more limited experience. Doubtless in the case of rheumatic joints, blisters act in a similar way, by attracting the morbid element from the articular textures. I have lately employed pretty extensively, and with unquestionable benefit, the local application of iodine to the affected joints, for which purpose we may employ either the tincture of iodine, or a stronger compound, which is used at the King's College Hospital, and is called Iodine paint, the formula of which is as follows:—

℞. Iodinii, - gr. lxiv.
Potassii Iodidi, gr, xxx.
Alcohol, - - ℥j. M.

The mode of application is by painting the part freely with a camel-hair pencil. More or less smarting is produced, and frequently vesication, or an herpetic eruption may come on. The painting may be repeated as often as circumstances may demand. It is extremely useful where any effusion has taken place into synovial membranes or sheaths.

General Treatment of the Rheumatic Fever.—The natural history of the disease tells us that the paroxysm rarely terminates in less than ten days ; and seldom lasts longer than six or eight weeks. The mean duration of disease may be rated at from twenty-one to twenty-eight days. A mild attack is over in a fortnight ; a severe one lasts fully six weeks; an ordinary one, three or four weeks. Now, on comparing the statements of authors, and the duration of the disease under their different plans of treatment, we do not arrive at a conclusion different from that which I have stated. Dr. Haygarth, who relied chiefly on the administration of bark, gives a mean duration of not less than a fortnight ; but it is impossible to derive any accurate conclusion from his incomplete, although elaborate tables. From an analysis of the cases related in Chomel's work, I obtain four weeks as the mean duration from the first seizure to the convalescent state. In the average of my own cases in hospital practice, the patient did not become fairly convalescent under four weeks. According to the table in Dr. Macleod's book, of two hundred and six cases, sixty were cured in from one to two weeks ; one hundred and thirty in from two to six weeks ; sixteen required from seven to sixteen weeks. A careful analysis of Bouillaud's thirty-six cases leads me to assign four weeks as nearly their mean duration, although he boasts of cutting short the disease by copious bleedings in six or seven days. M. Bouillaud, however, considers his patients convalescent as soon as some relief is obtained to the acute affections of the joints; and this he says takes place in from four to six days from the commencement of treatment; yet a perusal of his cases will show that in all, the patient was far from being cured of rheumatic fever, after his so-called period of convalescence, and that several had speedy relapses after that time.

Those channels which are obviously the most favourable for the elimination of the rheumatic matter, are the skin, the bowels, and the kidneys ; hence the use of sudorifics, purgatives, and diuretics is indicated. Of sudorifics, Dover's powder is among the best, and is sanctioned by the experience of many years ; pure opium answers the double end of promoting diaphoresis while it procures rest and relieves pain ; or the nitrate of potash may be given either in combination with opium and ipecacuanha, (a nearer approach to the original formula for Dover's powder,) or in solution along with minute doses of tartarized antimony. I am not in the habit of exceeding five or six grains of the nitrate of potass with one-eighth of a grain of the tartar emetic (to which, if there be nausea, a few drops of tincture of opium may be added,) every four or six hours. The practice of giving very large doses of nitre, tried formerly in this country, and lately revived in France, does not appear to have any decided influence upon the mean duration of the disease. The administration of opium, however, is of great importance : it must be given in large doses, and is borne well by the patient. A good opiate should always be administered at night, and when there is much suffering, two or three doses should be given throughout the

day. The irritative character of rheumatic fever is strongly in favour of the use of this medicine.

The purgatives which seem most applicable are those which produce copious watery evacuations. The combination of sulphate and carbonate of magnesia answers very well, the addition of the alkaline earth serving to neutralise some of the free acid which is so abundantly secreted. Colchicum is useful as a purgative, and if employed in large doses, exerts a powerful action on the intestinal canal, but the employment of it is not devoid of serious objections. The tartrate of potass is also a useful purgative.

The best mode of promoting diuresis in this disease is to allow the patient to use simple diluents freely ; to these no other limits need be put than those which his own sensations will dictate. Any more direct stimulants to the kidneys would probably excite those organs too much.

The saline effervescing draughts are agreeable and cooling, and have the additional recommendation of serving for the neutralization of the free acid, in its passage through the kidneys.

The objection which has been urged against local applications to the affected joint during a paroxysm of gout, does not apply to rheumatic fever. In the latter disease the morbid element is escaping at many places, in the former at a single joint ; if we disturb its attraction to this one joint in gout, it may fly to a new one, or to some internal viscus. These risks are obviously wanting in rheumatic fever, as the disease is more generalized in its effects. And experience teaches us that the greatest relief may be obtained by local bleeding in this malady. When the joints appear to suffer much, the application of leeches (for the patient can seldom bear cupping) is called for, lest the articular textures should suffer ; and the bleeding from a dozen leeches is almost always productive of immediate relief to the pain and swelling. As, however, local bleeding does not prevent a joint from being revisited by the rheumatic irritation, the employment of it in ordinary cases, and as a general practice, is not to be recommended. You may apply leeches to-day to a joint, to-morrow it will be free from pain, and the next day it may be swollen and painful again. If the pain and swelling, both or either, be great, and such as to excite apprehension for the ultimate integrity of the textures, then the application of leeches will be really useful, and should not be deferred.

When the articular affection is disposed to be chronic, and the rheumatic matter appears to linger about a joint, local bleeding may be of essential service. Its timely use, in such instances, may save the patient from a tedious convalescence, if not from a chronic rheumatism. Local bleeding, in the earlier stages of the rheumatic paroxysm, has the additional advantage of contributing to relieve the general fever in a manner not likely to injure the constitution.

Warm fomentations or poultices often give considerable relief, and if agreeable to the patients, they may be used with safety. It has been proposed to foment the joints with a solution of an alkaline

salt, as of soda or potass. I have seen this practice tried, but did not perceive any superiority of the alkaline fomentation over that of plain water.

I am strongly inclined to believe that counter irritation by blisters to the affected joints will be found a very useful practice in the severer cases of rheumatic fever, even in the acute stages. It will generally, however, be advisable to precede the application of blisters by that of leeches. My experience of this practice has not been sufficiently extensive to warrant my speaking confidently concerning it; but I think it deserves a more extensive trial than it has yet received; for it is highly reasonable to suppose that any irritation of the surface, acting on the principle of revulsion, must relieve the deeper seated tissues.

The Heart Affection.—Its Treatment by Mercury, &c.—Any change in the character of the pulse, the occurrence of intermissions in it, a sudden diminution or increase in its frequency or force, an irregularity in its rhythm, ought at once to awaken the suspicions of the physician as regards inflammation, either within, or on the surface of the heart. Above all, he should be most careful in his endeavours to detect the first indications of a change of structure on the outer or inner surface of the heart, as denoted by the presence of a friction-sound, or a bellows-sound. The occurrence of any of these signs is, in my judgment, a sufficient warrant to justify his having immediate recourse to local bleeding over the cardiac region. A large number of leeches should be at once applied; or a good quantity of blood should be taken by cupping. I have no doubt that by prompt practice of this kind, inflammation of the heart may be checked at its commencement; and as this is the time when the interference of art may be the most efficacious, it is plain how much the future comfort of the patient depends on the vigilance and sagacity of his medical attendant at this juncture.

My experience leads me to value very lightly the efficacy of general bleeding in inflammation of the heart. I have never seen an instance in which it unequivocally did good; and the prevalent custom of combining local depletion with venesection, shows that practitioners do not usually place much reliance upon it. Immediately after local bleeding, a large blister should be applied, not exactly over the cardiac region, but a little to the right of it, in order to allow space for the application of more leeches if necessary. The blistered part should be afterwards dressed with mercurial ointment, the cuticle having been previously freely removed, so as to expose a large surface, from which an abundant secretion may be provoked. If there be much irritability, opium should be freely administered; and, if a friction-sound or a bellows'-sound be present to indicate that the products of inflammation have already begun to be formed, then mercury, combined with opium, should be given in doses sufficient to get the system under its influence as quickly as may be done without depressing the patient too much. There is a two-fold object in administering mercury under these

circumstances; first, to check the effusion of lymph; and, secondly, to promote the absorption of that which has been already poured out. When the constitutional effects of mercury can be quickly induced, these important objects will generally be attained.

Cases now and then occur in which large quantities of mercury are given ere the mouth becomes affected, or in which it seems impossible to produce salivation; are we to infer that in such cases mercury does no good, and that it would have been better omitted? It appears to me that there are two states in which, although inflammation exists, mercury is slow to produce its constitutional effects. The first of these is when the fever is of a highly irritative character, the nervous system being in a state of excitement or "alarm;" this occasionally happens in pericarditis, and may be brought on by the too frequent use of the lancet. Mercury is almost inadmissible in such cases, for it increases the general irritability; if administered, it should be given sparingly and conjoined with opium in large doses. The second is, when a very extensive inflammation exists; under these circumstances mercury appears to me to act as opium does in certain diseases: in tetanus, for instance, what enormous doses of this drug will be borne with little or no apparent narcotic effect! What large doses of opium may be given in rheumatic fever itself! Such quantities could not at all be borne by the system in health. In pneumonia we give tartar emetic freely, it acts favourably upon the pulmonary disease, without perceptible effect beyond the resolution of the pneumonic inflammation; yet if we gave as much to a person in health, nausea and vomiting would immediately ensue. Tonics likewise may at times be given to an enormous extent without any exciting effect on the system; and so also with stimulants, a man in typhus fever may take with impunity in a short time, as much wine and brandy as would intoxicate him in a state of health. I believe the same principle holds with respect to mercury; and that in some cases it acts wholly on the diseased organ, and produces none of its usual constitutional effects. We are not to infer that in such cases mercury does no good, and is inadmissible; on the contrary, if no untoward effect is produced, we should persevere with the use of it, even after the more acute symptoms have subsided. The rate of action of the mercury may even assist us in forming an opinion as to the extent of the inflammation, a tardy action indicating that it occupies a considerable surface; and it may also aid our prognosis, for the appearance of the affection of the mouth within a moderate time (two or three days) augurs well, whilst a difficulty in producing ptyalism must be considered inauspicious.

Lond. and Ed. M. J. of M. S., Dec. 1843, *p.* 1084.

15.—ARGUMENTS AGAINST LIEBIG'S THEORY OF GOUT.

By Robert Bentley Todd, M.D., F.R.S., &c. &c.

It is affirmed [by Liebig and Jones] that the presence of lithic acid in the system is due to the deficiency of oxygen; that in the

natural state, under the influence of a due supply of oxygen, this substance nearly or altogether disappears, being decomposed by oxygen into urea and carbonic acid; so that in healthy urine its quantity is very small, and in the carnivorous animals, which are largely supplied with oxygen, it disappears altogether. The free acid, which exists in the system, is said to be lactic acid derived from the stomach, and it is further added, that this and other non-nitrogenous compounds present in the blood, attract the oxygen, and hinder its action upon the lithic acid.

Were this theory true, two conclusions must flow from it. First, that under all circumstances where oxygen is abundant, lithic acid shall be absent, and urea exist. And, secondly, where oxygen is deficient, lithic acid must be present, and urea be deficient; or that in either case, the quantities of the lithic acid and urea must be in an inverse ratio.

Now, it appears from the analysis made by M. Becquerel of the urine in various diseases, that such a relation of quantity between these two important elements does not exist. He finds that in many cases of fever, the quantity of urea is very slightly diminished below the natural standard; and that the normal proportion of urea to lithic acid is but little changed. Whilst in chlorosis and anæmia, diseases where the deficiency of oxygen is obvious, lithic acid, which ought to be increased, is diminished, and in the former of those diseased states it is reduced to a minimum, and the urea is diminished also.

In Bright's disease, in which the urea is so often diminished *in the urine*, the lithic acid ought, according to Liebig, to be increased; but such is certainly not the case in the great majority of instances; on the contrary, it is very generally much diminished. And, when we reflect on the anæmic, cachectic appearance of the class of persons who are for the most part the subjects of this disease, we cannot fail to perceive that their system is greatly deficient in oxygen; a condition, which, according to this chemist, ought to have left a considerable quantity of lithic acid undecomposed.

Again, according to this theory, the existence of the lithates is incompatible with that of the phosphates in considerable quantity in the same urine. For the production of the latter, if Liebig's views be correct, is due to the very cause which ought to occasion the disappearance of the former, namely, an abundant supply of oxygen. But I can aver, from my own experience, that phosphates and lithates may co-exist in urine, in great abundance. In such urine it sometimes happens that the lithates are not deposited on cooling; but the phosphates are precipitated as a cloud, which becomes greatly increased on the addition of ammonia, or by heat. Or, if instead of ammonia, a few drops of nitric acid be added, a copious precipitate takes place of lithate of ammonia, which is readily dissolved by heat.

Moreover, an excess of urea, and an excess of lithic acid ought not to exist together; but that they may so exist, I have positive

proof in the urine of a patient at present under my care, which, with a specific gravity of 1030, deposits lithate of ammonia copiously, and yields nitrate of urea in large quantity immediately on the addition of nitric acid.

It is remarkable that the two classes of animals, which are most highly oxygenated, are deficient in urea, and secrete lithic acid in abundance. These are birds and insects. In the former animals, as Dr. Golding Bird has remarked, respiration is very perfect; their animal heat is superior to that of man, and their hearts pulsate much more quickly; their system must, therefore, be freely supplied with oxygen. In them, therefore, no uric acid ought to escape unchanged; yet the truth is, that the acid is excreted nearly as abundantly as in serpents. "The semi-solid urine, which escapes from the cloaca of the jackdaw, parrot, and many other birds, contains a large porportion of urate of ammonia."

In insects the lithate of ammonia may be seen in the Malpighian vessels, or kidneys, as many observers have found, and as I can affirm from my own observation. And, I may add, that the case of insects is still more opposed to the doctrine of Liebig than that of birds, for in them the oxygen is brought to every part of the body by the numberless ramifications of the tracheæ, and even to the walls of the tubes, by which the excretion is effected.

In the present state of our knowledge, it seems impossible to determine the correct theory of gout. It appears highly probable, however, that the peculiar gouty matter is in the first instance derived from the stomach or duodenum, inasmuch as a disturbance of the functions of those parts is an invariable antecedent or accompaniment of the fit. And as such derangements are generally accompanied with an undue development of lactic acid, an acid nearly resembling the acetic in its constitution and properties, it seems fair to conclude that it may be the primary disturbing agent. Again, the habits of life of those, in whom the gouty diathesis occurs, are such as to favour the generation of lithic acid. And, lastly, as the liver is deficient in its action in those cases, it may be conjectured that soda is imperfectly eliminated from the blood, and may accumulate in the circulation to unite with lithic acid, wherever that may be formed in the secondary destructive assimilating processes.

The cases, which I have adduced, of gout appearing in low states of the system, show that the morbid element of the disease may be present, independently of lithic acid, for in them this substance either did not abound, or did not exceed the normal quantity by a greater amount than may be at any time caused by a slight general disturbance.

It appears to me that we must look for the matter of gout as a compound, derived from a product of unhealthy action of the stomach and duodenum, which being absorbed into the blood, unites there with some element of the bile which has been suffered to accumulate through the defective secretory action of the liver.

As the same causes which induce these two states, will give rise to a lithic acid diathesis, we find it usually associated with them. But the former may exist without the latter; and, therefore, gout may show itself without the occurrence at the same time, of a præternatural quantity of lithic acid.

An organic compound, such as I have conjectured, may exist in the blood in variable quantity, and for an indefinite period, contaminating the whole frame and the offspring from it, and may thus give rise to the gouty diathesis. Or, this matter, ever present in the system, may be liable to periodical accumulations, which can only be got rid of by periodical paroxysms.

Lond. and Ed. M. J. of M. S., Dec. 1843; *p.* 1082.

16.—ON PAIN OF THE LOINS.

By Dr. Oke, Southampton.

Perhaps there is no symptom more commonly met with in practice than pain of the loins, which is usually and at once attributed to bile, gravel, or rheumatism; but as it may be also derived from other causes left out in a hasty decision, I shall enumerate them, and endeavour to point out the symptoms by which each may be distinguished.

Pain of the loins may be derived from the muscles, from the liver, from the duodenum, from the kidneys, from the colon, from the uterus, from the aorta, from the spine, or from matter collected on the psoas muscle independent of spinal disease.

In order to arrive at its true cause, we must endeavour to ascertain what function is principally involved, which will at once lead us to it.

If the pain be rheumatic, it will be increased by pressure, and by the slightest action of the muscles affected. There will probably be also rheumatism in other parts of the body, the system will not evince much disorder, the urine will be high colored, and deposit a lateritious sediment.

If derived from the hepatic function, the pain will shoot upwards along the splanchnic nerves to the scapulæ; the alvine evacuations will be either deficient in, or exuberant with, bile; or show a morbid quality of that secretion; the urine will have a bilious tinge; there may be congestion of the hæmorrhoidal veins; and the spirits will be depressed.

If from the duodenal function, three or four hours after a meal the pain will be aggravated, shooting through towards the right side of the abdomen, and remaining till the food has passed into the jejunum. Dyspeptic symptoms will prevail, and there will frequently be painful pustules breaking out about the face. I have lately met with a case in which the boils were extremely annoying.

If from the kidneys, the pain will shoot down the course of the spermatic nerves towards the round ligament in the female, and

towards the testis in the male, which will often be retracted by the action of the spermatic nerves upon the cremaster muscle. There will be more or less irritation communicated to the mucous membrane of the bladder. The urine also will be diagnostic in this instance; it may deposit mucus, calculous matter, blood, pus, or albumen, according to the nature of the case; or it may be otherwise morbid in its constitution.

If from the uterus, the pain of the back will arise either from disordered function or disease of that organ. In the former case the pain will be of a neuralgic character, will return in forcing paroxysms extending around the hips and hypogastric region, will be attended with hysteria, and often with increased quantity of the menstrual discharge. In the latter case the pain will be *constant* and severe, extending along the anterior crural nerve half way down the thighs. There will be a thin, offensive discharge from the vagina. The countenance will be wan and sallow, exhibiting the wear and tear of organic lesion.

If from the colon, there will be constipation, and inflation in the course of the bowel, or the fœcal discharges will be of small diameter, or there will be soreness of the intestine under pressure, especially at its ascending or descending portions, accompanied by mucus, or shreds of lymph in the form of boiled vermicelli, amongst the excretions.

If from arterial dilatation, an abnormal pulsation of the vessel involved—the aorta, for instance—may possibly be detected by auscultation in the incipient stage of the disease, *if such were suspected;* but in a large majority of cases such a cause may reasonably escape the attention of the ablest surgeon, from there being no tangible symptom that might lead him to suspect it; and even after the dilatation has considerably advanced, it may be sufficiently large to press upon and disturb the spermatic nerves, but not large enough to project and pulsate externally, and this may, at this stage, be confounded with diseases of the renal function.

A few years ago I met with a case of this kind in a man of middle age. The pain had been constant and wearing, shooting from the loins down the course of the spermatic nerves, and for a considerable time was reasonably attributed to the renal function, especially as there had been constant disturbance of this function. At length the aneurismal sac began to approach the surface, and then, of course, the cause became apparent.

If from disease of the spinal column, the pain will be aggravated by percussing the spinous processes at this part of the spine, or by suddenly striking the toes against an uneven surface. There will be involuntary action of the muscles, especially of the flexors of the legs, diminished temperature, abnormal feelings, and more or less loss of power of the lower limbs. Should there be at the same time any unnatural projection of the spinous processes, the disease will be confirmed.

If from a collection of matter upon the psoas muscle, unconnected

with spinal disease, the pain will be continued, dull, and deep-seated, extending from the loins down the psoæ, or in whatever direction the matter may have taken its course. The pain will be aggravated by flexing the thigh towards the abdomen, and there will be difficulty in walking; moreover, there will be marks of a strumous habit, and more or less symptoms of hectic fever. Should any fluctuating tumour present at the groin, or at any other point where the matter may find its way out of the body, it will be conclusive as to the nature of the case.

Prov. Med. J., Feb. 17, 1844, *p.* 384.

17—.ON THE HYDROPATHIC TREATMENT.

[On this subject we have the following sensible remarks in a leading article of the Lancet:—]

On examining the various elements of which the hydropathic treatment is composed, we find that they may be reduced to the following:—The temporary application of cold to the skin after copious perspiration has been produced without artificial heat; total abstinence from all stimulating fluids; simple diet; early hours for rising; and regular bodily exercise.

With the exception of the first, the one, it is true, on which the greatest stress is laid, all these means of treatment can only be considered as hygienic agents; and if we analyse carefully the sweating and bathing processes, we find that they are merely the application to disease generally of agencies the use of which has been, from the earliest times, familiar, not only to the profession, but to the public at large. To appreciate correctly the influence of the hydropathic medication we must recal to mind the physiological action of cold water on the human frame. Immersion in cold water produces a sudden shock on the nervous system, and is immediately followed by contraction of the cutaneous capillaries and retrocession of the blood from the external to the internal regions. The nervous system, however, soon rallies, and the heart impelling the blood with renewed vigour, it is returned to the periphery of the body, distending the capillary vessels which it had previously abandoned, and giving rise to an universal glow or sensation of warmth. The intensity of this *reaction*, as it is called, depends on various causes, one of the most important of which is the state of the skin previous to immersion. If its circulation is active and vigorous, and if, consequently, the surface of the body is warm, the reaction is certain, prompt, and vigorous. If, on the contrary, the circulation of the skin is sluggish, deficient in energy, the reaction is incomplete, or may be absent entirely. In this case the person who has been immersed, on getting out of the water, shivers, feels an universal sensation of cold, pain in the chest, cephalalgia, and may not experience reaction for some minutes, or even hours.

The above principle, that the intensity of reaction after the application of cold depends chiefly on the previous vigour of the cutaneous circulation, has scarcely been sufficiently appreciated by hygienists. It is this principle which explains the innocuity of the cold bath as used by hydropathists in *some* diseases. By wrapping their patients up in a blanket, or in a wet sheet first and then in a blanket, as soon as they awake in the morning, when they are warm, and the circulation of the skin is active, perspiration is easily produced; and it is whilst they are in this state, whilst the cutaneous circulation is the most vigorous, that they are plunged into cold water. As might physiologically be expected, the reaction is generally prompt and energetic, and thus the tonifying effects of the cold bath are often obtained with patients who would not have had sufficient warmth of skin or vital energy to react against the cold bath, as usually employed.

But this mode of administering the cold bath and the physiological data on which it is justifiable, are not new to the profession. With the exception that before Priessnitz the sweating stage was produced by artificial heat, which, in our opinion, modifies but little its physiological action, it has been known and put in practice from the remotest antiquity up to the present day. The Romans of old were in the habit of sweating in the *sudatorium*, and of then throwing themselves into cold water. The Russians and Finlanders of the present day remain for many minutes exposed to vapour heated to 150° Fahr., and then throw themselves into water just above the freezing point, or roll themselves in the snow. Even in our own country, where such practices are not in use, it is generally understood that a person may throw himself into cold water when warm or perspiring from exercise without the slightest danger. Indeed, if ladies catch colds, pneumonias, &c., by coming out of ball-rooms, and heated localities, a circumstance which is much less frequent than is generally supposed, it is not because they come out of a very warm locality into a cold one, for the warmer the skin is the more able is the economy to resist the action of the cold, but because small portions only of the cutaneous surface, the neck and shoulders, for instance, are exposed for a considerable length of time to the action of the cold air. How seldom do we hear of men, whose clothing is such as to place the entire economy under the same hygienic condition, experiencing any inflammatory attack from such a cause. In northern climates, where the houses are heated in their totality, attacks of bronchitis, laryngitis, &c., are, we believe, much less common among the higher classes than in our own country, although the cold out of doors is much more severe. The reason is that the skin being thoroughly warmed when they leave their dwellings, the system is much better able to resist the action of the cold, to react against it.

If the view we have taken of the action of cold water on the skin is correct, and it is the one entertained by all the first physiologists and hygienists of the day, the sweating and bathing processes of the

hydropathists are reduced to little more than a novel mode of applying the cold bath and of ensuring its efficiency in delicate constitutions. It is merely the exaggeration of the cold sponging in the morning, on rising warm from bed, which medical men so often recommend to their patients.

As to the abundant perspiration, respecting which so much is said, and which is stated to be so extremely efficacious, it is, in reality, of very little importance whether it be produced by rolling a person up in blankets, and thus arresting the natural evolution of heat from the skin until that organ relieves itself by abundant perspiration, or whether it be produced by the direct application of moisture and heat combined in the shape of heated vapour. The effect, as regards the elimination of a certain proportion of the animal fluids through the medium of the skin, is the same. And yet these are the novelties brought forward by the hydropathists,—novelties, as old as the art we profess,—novelties, the nature and action of which every medical man has learned as a part of his professional education.

The means of treatment which constitute hydropathy, considered as a portion of our therapeutical arsenal, are powerful medical and hygienic agents, but can only be adopted as a panacea for all diseases by the ignorant public, or by such medical men as wish to raise their own fortunes on the credulity of others, or are destitute of that valuable faculty which we alluded to in a former number—*common sense*. By attention to diet, by moderation in the use of stimulants (or in some cases, by abstaining from them entirely), by exercise, by early rising, by cold ablutions, we preserve health; and in a long series of dyspeptic and nervous disorders, occasioned by town life, in which the stomach is often overloaded with food, stimuli are taken in excess, exercise is neglected, late hours are kept, and the mind is continually on the stretch, attention to these points is equally successful in restoring lost health. Cures are, indeed, every day effected by all medical men who practise extensively our profession, through the action of the above means, and that without their demanding of their patients the sacrifice of their residence or occupations, and without anything more than a placebo in the shape of medicine being administered. Is it then extraordinary, that when we add to their agency freedom from the harass of business, the novelty of a picturesque highland residence, and a military-like regularity in the execution of the plan laid down, that many thus affected should rapidly recover at Graefenberg, Marienberg, Malvern, or other similar places? We must not also forget that the hydropathists have many advantages in the application of their hygienic rules over regular practitioners. They *make* their patients get up at five, abstain from stimuli, take long walks, &c., whilst members of the faculty in general can only *advise* those who place themselves under their care to follow such a course; for they have not the halo which public opinion gives to novelty, and more specially to all panacea-mongers. Pricssnitz, the peasant, is said to rule over lords and ladies, at Graefenberg, with a rod of iron.

His very nod is obeyed by his patients, whom he never deigns to acquaint with the motive of his prescriptions. What would a West-end fine lady say of her physician, if he *insisted* on her getting up at five o'clock, taking a cold bath, and then walking round Hyde Park a couple of times before breakfast? He would be called a fool and dismissed. But the same lady will submit to this, or anything else, if it comes from a Morison or Priessnitz, or even from one of their more humble followers.

No doubt, in cases such as those we have just mentioned, the cold bath, which Dr. Forbes justly calls the most powerful tonic of the Pharmacopœia, is a valuable adjuvant, but we much doubt whether its efficacy is much increased by the immoderate sweating that precedes it. It appears that in a great number of cases, after a certain time, numerous boils and abscesses appear on the skin, and in the subcutaneous cellular tissue. These are appealed to, as indicating that the peccant humours of the blood have made their way to the surface of the economy; but every rational medical man must give a very different interpretation to the manifestation of such phenomena. They can, in reality, only be considered as the result of repeated and long-continued irritation of the skin, and must do harm by their reaction on the system generally.

There is another class of diseases in which the hydropathic treatment is calculated to be beneficial, viz., in rheumatic and gouty engorgements of the fibrous tissues of the joints. In these cases, it is more especially the sweating and bathing that act on the engorged tissues, gradually promoting a healthier action of the absorbents, and favouring the resorption of the effused lymph. In gouty constitutions, the hygienic treatment resorted to is also precisely the one calculated to modify the constitutional diathesis. If we could always persuade a patient who consults us for a first fit of the gout, to drink water for the rest of his life, to take exercise, and to diminish by half the amount of animal food he is in the habit of taking, there would be but little chance of a return of the attack. But although we think hydropathy harmless, or even beneficial, when directed against the sequelæ of gout and rheumatism, we are very far indeed from admitting this to be the case during an acute attack of gout or rheumatic fever. The experience of ages tells us that in such cases there is a general inflammatory diathesis which explodes in the local inflammation, and that if repercussion of that local inflammation takes place, there is danger of the inflammatory action settling on some vital organ, and terminating the life of the patient. It is generally acknowledged to be of such extreme importance to prevent this translation of the disease from the extremities, that no physician in his senses would ever dream of preventing, by cold local applications, the manifestation of an incipient attack of gout, and would even be very careful how he applied cold to a person subject to gout in the interval of the attacks. This remark applies more especially to persons advanced in life, as they with difficulty resist even common inflammatory

attacks of the more important viscera. There can be no doubt that Sir F. Burdett's death is to be attributed to the neglect of this pathological principle. In nearly all acute diseases we should be inclined to consider hydropathy a most dangerous practice.

Lancet, Feb. 17, 1844, *p.* 693.

18.—ON THE USE OF COD'S LIVER OIL IN STRUMOUS DISEASES.

By W. O. Chalk, Esq.

It would seem, says Mr. Chalk, that ol. jecoris aselli is an active therapeutic agent in strumous, rheumatic, and some skin diseases; and that its revival as a remedy is likely to prove of great service. It cannot be considered as a merely dietetic agent. It possesses considerable power in allaying the diseases of the joints, especially strumous and rheumatic, and that with a rapidity unequalled by most other medicines. Tubercular depositions are absorbed under its influence. Even in the lungs it appears to have the power of arresting, or at least of modifying, the deposit. Scrofulous diseases of the bones are relieved by it. Faulty secretions are quickly changed to healthy, especially the hepatic. Some experiments were made on patients where no local affection existed, with a view to ascertain its effects on the biliary organs. Its success, in several instances, was complete, in changing the varied and clay-coloured motions of scrofulous habits to a healthy condition. With children the exhibition of the oil was commonly followed by relaxation of the bowels; with adults it frequently produced constipation. One of the most remarkable properties is its power of inducing *embonpoint*, and of restoring a healthy hue to the countenance. The number of patients treated with ol. j. a. amounted to between eighty and one hundred, of whom a large majority obtained decided relief. A great deal of difficulty was at first experienced in the administering of a remedy so disgusting and nauseous; nothing, I believe, could have induced many to take it but the opportunity they had of observing its good effect on others. Since my return to town, I have endeavoured to obtain a purer oil, for, however useful as a medicine, it would be impossible to bring it into general use unless deprived of its impurities. After examining several specimens, I have found that prepared by Mr. Wright, of 54A, Gloucester-place, Portman-square, to be the best, and its qualities unimpaired by the process employed for its purification. He states, as the result of his experiments, that he has obtained oils of various qualities, some of them quite inert. The liver of the milter cod yields the strongest oil, and darker in colour than that of the spawner. The two specimens now by me are exceedingly pure, nearly inodorous, and of a crystaline clearness. One is of a brown colour (the milter) the other of a light yellow (the spawner); the specific gravity of the former is ·921·5, temp. 64; that of the latter ·919, temp. 64. The quality of the oil is consider-

ably impaired when a high temperature is employed in the manipulation. The object in giving publicity to these cases is not to speak of the cures performed by ol. jecoris aselli, for they will be found comparatively few, but to call the attention of others to the fact that it does yield relief to a class of patients whose diseases too often baffle the attempts of the most enlightened practitioners, and to induce them, when opportunity offers, to test its virtues for themselves.

[The dose was generally half an ounce three times a day, continued for weeks and even months together.]

Medical Gazette, Dec. 29, 1843, *p.* 414.

19.—ON ARSENIC AS A POISON ; ITS TESTS AND ANTIDOTES.

By E. J. Shearman, M. D., Rotherham.

In order to prove the existence of arsenic, in a court of justice, we should be enabled to show the following facts so satisfactorily, that a jury may not only see, but perfectly understand them.

1st. The metal should be produced either from the contents of the stomach, intestines, or urine, if the patient should survive : or, if dead, from these and some part of the body.

2nd. We should be able to prove that the animal substances experimented upon were the excretions and parts of the patient's body only ; unmixed with any other matter.

3rd. We must also prove that the tests we use to shew the existence of arsenic have not a particle of arsenic in themselves. And this requires great caution, because a skilful advocate might make a guilty prisoner appear innocent, owing to this omission.

4th. As antimony, bismuth, tin, zinc, lead, tellurium, cadmium, selenium, and potassium, sublime in a somewhat similar manner to arsenic, and may be mistaken for it, it is absolutely necessary to guard against such a mistake.

The most common mode of obtaining arsenic from an organic solution is that of Dr. Christison ; in which he gets rid of the animal matter by boiling for half an hour in distilled water with strong acetic acid—which often precipitates the casein, and renders it sufficiently pure : if not, the solution should be neutralized by potash or ammonia, slowly evaporated to dryness, redissolved in distilled water, filtered when cold, and then evaporated several times again. This eventually produces a solution free from animal matter. With the ammoniacal nitrate of silver this gives a *lively yellow precipitate*—the *arsenite of silver:* with the ammoniacal sulphate of copper, an *apple or grass-green precipitate*—the *arsenite of copper :* and with sulphuretted hydrogen gas (previously acidulated with acetic acid) it throws down an abundant *sulphur yellow precipitate*—the *sulphuret of arsenic.* This sulphuret should be collected on a filter, dried, mixed with black flux, or freshly ignited charcoal, introduced into a bulbed tube, and properly heated by a spirit lamp, when a *brilliant polished metal-*

lic ring of metallic arsenic will be sublimed all round the tube. *This is called the reduction test.* This metallic ring of arsenic should then be oxidized by exposure to the heat of a spirit lamp in atmospheric air; when *octohedral crystals of arsenious acid, with triangular facettes,* will be deposited on the upper part of the tube, which may be easily seen with a tolerably good microscope.

In Marsh's test, where hydrogen gas is generated from zinc, sulphuric acid and water, and the suspected substance is added in solution, arsenic having such an affinity for hydrogen quickly combines with that gas and forms arsenietted hydrogen, which being ignited, metallic arsenic is deposited on porcelain or glass, and may be seen in *rhomboidal crystals* with a powerful microscope. The objection to this test is, that we are obliged to use zinc which often contains arsenic: and although it shews the most minute quantity, how can we swear, after the first layer of zinc is oxidized, that there may not be arsenic in the next? for arsenic runs in the veins of the ore.

In Professor Reinsch's test, modified by Christison, we mix the suspected matter with distilled water, add ℥ij. of pure hydrochloric acid to every eight ounces of fluid, immerse a very thin and bright copper plate, and boil for half an hour, when the whole of the copper plate will be coated with arsenic. By cutting these plates into chips, and exposing them in a tube at a low red heat over a spirit lamp, arsenious acid will be sublimed in *octohedral crystals with triangular facettes,* which may be rendered more distinct by turning out the chips, covering the tube with the finger, and chasing the oxide up and down the tube over the lamp.

A most ingenious, scientific, and elegant method of obtaining arsenic has lately been introduced by Robert Ellis, Esq., of University College. He has discovered that the oxides of copper have such an affinity for arsenic, that by merely passing arsenietted hydrogen over them, a double decomposition takes place: caloric is given out; the oxygen of the copper uniting with part of the hydrogen forms water, which is seen in the process; the arsenic of the arsenietted hydrogen uniting with the copper forms arseniuret of copper—the remaining hydrogen being set free. This arseniuret of copper may be easily sublimed in a glass tube, when the whole of the arsenious acid will be deposited in *thick brilliant clusters of octohedral crystals on the tube.* The objection urged against Marsh's apparatus will equally apply to this—that of being obliged to use zinc for the generation of hydrogen.

The cleanest and safest mode of detecting arsenic is by decomposing distilled water by galvanism, to which is added the suspected solution, and pure sulphuric acid: collecting the hydrogen from the negative pole or zincode of Smee's battery, igniting it, and examining the stain left in a glass tube, open at both ends. If there is the smallest particle of arsenic, the hydrogen will unite with it; and you then have a stain of metallic arsenic with *rhomboidal crystals* which you may then oxidize into *octohedral crystals;* collect, dissolve in water, go through the fluid tests, reduce the sulphuret in a tube, and

sublime into arsenious acid again. This is the most delicate test known, and perfectly free from the charge of using any substance in which arsenic can exist.

The most likely substance to be mistaken for arsenic by any of these tests is antimony, because antimony sublimes into the same kind of crystals as arsenic. But by attending to the following rules the two substances may easily be distinguished. Metallic arsenic sublimes into rhomboidal crystals at a heat of 356° without liquefying. Arsenious acid sublimes at 380°, into octohedral crystals. Metallic antimony sublimes not under 810°, and on cooling, acquires a highly lamellated texture, and *yields octohedral crystals like arsenic*, which are *insoluble in water;* whereas the octohedral crystals of arsenious acid are very soluble, and which solution may be tested by the three fluid tests.

In the reduction test with sulphuretted hydrogen gas, it should be carefully remembered that the sulphurets of antimony, tin, selenium, cadmium, and tellurium, have nearly the same yellow colour, and are deposited in the same manner as arsenic, and when reduced to their metallic state with black flux, they not only give an appearance so much like arsenic, that it requires a very practised eye to distinguish each, if even that be possible ; and tellurium and cadmium also exhale a garlic odour like arsenic.

The question then comes,—how can a witness swear most positively, that a substance is arsenic and nothing else ; and how can he convince an unscientific jury of that fact ? I think only in the following manner.

1st. By producing the metal, and showing its crystals.

2nd. Reducing it to the oxide, and showing its crystals.

3rd. From these crystals going through all the fluid tests.

4th. Reducing the sulphuret again to its metallic state, then to the oxide, and again going through the fluid tests.

If this be shown clearly with all the before-mentioned tests, it will be impossible for any advocate to mislead a jury.

The only antidotes which have been discovered for arsenic are the moist hydrated per-oxide of iron, and the moist hydrated per-sulphuret of iron. I have lately given dogs and rabbits large doses of arsenious acid in solution and powder, and immediately afterwards large doses of the moist hydrated per-oxide of iron, and then killed them within a short time. The stomachs have shown minute patches of inflammation, but no arsenious acid could be detected by Reinsch's method, the copper plates having merely a scaly deposit of iron upon them ; nor could arsenious acid be detected in any other way. This is a strong presumption that the whole of the arsenic was reduced to its metallic state.

In the 1st vol. of the London Medical Gazette for 1841-2, page 116, is a communication from the celebrated Dr. Beck, containing an account of no less than 29 cases of recovery from poisoning by arsenic, by the prompt use of the moist hydrated per-oxide of iron, in the human species ; and I could point out more which I have observed

related in the journals. So that from the results of my own experiments, and the accounts I have read of the successful use of the moist hydrated per-oxide of iron as an antidote to arsenic in the human subject, by many practitioners, I am induced to place great reliance on this substance.

The last edition of the Edinburgh Pharmacopœia (as well as Dr. Beck in the above-named journal) gives a very good formula for preparing this antidote, under the name of "*Ferrugo.*" It can be kept good and fit for use in stoppered bottles, for anytime, if covered with water. A table-spoonful should be given every five minutes in plenty of water, to an adult, and a dessert-spoonful to a child, until relief from the urgent symptoms is obtained.

Dr. Golding Bird suggests that hydrated per-oxide of iron may be extemporaneously prepared by adding one ounce of liquor potassæ to half an ounce of tincture of sesquichloride of iron.

Med. Gaz. May 10, 1844, *p.* 188.

20.—TREATMENT OF ARTICULAR RHEUMATISM; BY COLCHICUM, NITRE, AND BLOODLETTING.

By Dr. E. Monneret.

Dr. E. Monneret has made some interesting observations on these points of practice, which deserve the serious consideration of the profession. Having shown in a preceding paper that the sulphate of quinine had no title to rank as a therapeutical agent in rheumatism as superior to many others, he now proceeds to test the value of the articles indicated above.

Twenty-five patients were treated by the tincture of the colchicum root, eight by nitre, and nineteen by copious blood-letting.

The energy of the preparation of colchicum was first ascertained —it was very powerful. The greater number of the patients took from 4 to 16 grammes (one drachm to four drachms) in the course of the twenty-four hours, in one, two, or four divided doses. No smaller dose than a drachm was ever administered, and several of the patients took it for seven, some for ten, and others for thirteen days. The medicine was not discontinued in any case until it was ascertained to have no effect upon the disease.

In eight of the patients, the diminution, or even total disappearance of the symptoms of rheumatism, coincided with the exhibition of the tincture of colchicum. The rheumatism in these cases was either of some days' duration, and was scarcely accompanied with febrile symptoms, and then ended in twelve or fourteen days, or it was completely chronic. In either case the powerful revulsion produced by the t. colch. on the bowels sufficed to suspend or to expel the disease; the improvement always coincided with the diarrhœa. In no case did the t. col. produce amendment or cure of rheumatism by any of those specific and occult properties which have been recognized in it by certain writers. In a few rare cases where its action was benefi-

cial and rapid, it operated as a true drastic purgative. With regard to any complications which existed with the disease on the side of the heart, M. Monneret observes that it is scarcely needful for him to say that they were in nowise modified by the tincture of colchicum. If the effects of this medicine upon rheumatism, then, are *nil* in fact, which seems quite certain, it is much otherwise in so far as the abdominal viscera are concerned. Upon this point considerable difference of opinion appears to prevail: some say the colchicum occasions, no intestinal disturbance, and that it does not purge; others maintain that it abates the pulse in force and frequency; and almost all unite in lauding its effects in rheumatism, &c. I have watched its influence in a sufficient number of instances, says M. Monneret, to have no hesitation in stating exactly what I have seen. In twenty-five patients to whom the tincture of colchicum was administered, I observed but a single order of phenomena at all referrible to the gastro-intestinal system. The most remarkable among them were nausea and vomiting, diarrhœa, colic pains, and bor-borygmi, and the whole of these effects almost immediately followed the exhibition of the medicine in large doses, and for a certain time. In other instances diarrhœa was the prevailing feature—there was little sickness or vomiting, but the alvine evacuations were copious and repeated. In a third and very small class the chief complaint was of nausea and vomiting without any purging.

The sickness supervened either immediately after taking the draught, or at some longer or shorter interval during the day or night. The discharges were almost always bilious, or evidently mixed with bile. The diarrhœa was generally in proportion to the dose; from one to two drachms of the tincture were followed by from two to twenty evacuations in the course of the twenty-four hours. The motions were mostly passed with acute suffering, violent colic pains in the bowels, tenesmus, and scalding of the anus. The matters passed were at first semi-fluid, but by and by they consisted in great part of a yellow and evidently bilious serum, in which floated a large quantity of whitish grains in form and colour like the ova of a fish's roe: there was also mixed with them a quantity of red matter like scrapings of meat, and some blood more or less mixed with mucus.

Vomiting was scarcely induced by a smaller dose of the tincture than from two to four drachms in a draught: it will not follow one drachm, two drachms, or even three drachms administered in a large quantity of tisan. Several elements enter into the consideration of the therapeutical effects of medicines; the dose, the mode of administration, and the intervals of repetition. The effects of remedies are signally different from those generally seen when they are given in large and closely repeated doses. Three drachms of tincture of colchicum in two doses, one close upon the other, produce effects which are not only more energetic, but also different from those generally witnessed.

It is obvious, therefore, that colchicum in tincture exerts its

agency especially upon the bowels. Of what nature is this agency? the diarrhœa, the dysenterical character of the stools, the severe griping which follows its exhibition, do not continue as in cases in which the intestinal mucous membrane is truly inflamed; its effect is mainly to alter the secreting faculty of the intestines—the fluids habitually poured out are increased in quantity, and changed in quality.

Colchicum appears to have no effect upon the urinary secretion; and must therefore be rased from the number of diuretics.

Blood-letting.—In nineteen cases of acute articular rheumatism, desiring to ascertain the effects of a somewhat energetic antiphlogistic treatment, the patients were bled at least three times each, in the course of the four first days, and cupping was further had recourse to around the affected joints, or to the region of the heart: only in two of the cases were tartar emetic and digitalis exhibited simultaneously. The quantity of blood abstracted was considerable,—large; and the venesections were repeated at short intervals. The mean stay in hospital of the patients thus treated was fourteen days —about the same as when other plans of treatment were employed.

The effect of the blood-letting on the disease can always be judged of by the state of the pulse; if it becomes less frequent, and loses force and volume, and if the temperature of the surface at the same time declines, the disease will end; if the pulse continues frequent, the disease is not yet at its conclusion. Sometimes the pulse falls suddenly after the first or second bleeding, and the disease appears about to be subdued; but it soon rises again to its old number, and matters go on as if there had been no prospect of amendment: the gradual and enduring fall of the pulse is the best sign of improvement; if it fall from six to twelve beats below its usual number, so much the better.

When the symptoms are not relieved by the blood letting within the first four or five days of the invasion of the disease, it is vain persisting in the abstraction of blood; the practice then is only injurious: bellows murmurs are set up in the heart and great vessels, the surface becomes drenched in sweat, the sleep is disturbed, the pulse is rapid, and the pains, far from diminishing, flit about from one joint to another, or remain obstinately fixed in those that were first attacked. The conclusion on the whole in regard to blood-letting is that in moderation it is useful, especially when practised early in the disease, within the first four days; after this, depletion by the lancet only reduces the patient, and renders his recovery more difficult.

Nitre.—Eight patients only were treated with nitre, and of the number one was affected with meningitis cerebro-spinalis, another with pneumonia. In all the rheumatism was recent and severe. The medicine was administered in doses of from eight to thirty grammes, (two to seven and a half drachms) dissolved in tisan. Its influence appeared to be absolutely *nil* in the whole of the cases. The pains in the joints, the signs of endocarditis, underwent no

kind of diminution under its influence. The pulse was not lowered, the febrile heat was not lessened by it. The quantity of urine passed in the twenty-four hours was not increased. In order to control the disease it was necessary in every case to have recourse to other means.

Medical Gazette, May 10, 1844, *p.* 206.

21.—INFLAMMATION AND GANGRENE OF THE LUNGS PRODUCED BY PARTIAL ASPHYXIA.

By J. D. Heaton, M.D., Physician to the Leeds Public Dispensary, and Lecturer on Botany at the Leeds School of Medicine.

[A case is related by Dr. Heaton, which shows very remarkably the power of partial asphyxia, by whatever cause produced, in causing that state of congestion of the lungs which must frequently end in inflammation. The partial asphyxia in this case was produced by a woman taking a large dose of laudanum. The immediate effects of the poison were counteracted, but in a few days pneumonia appeared in the right lung which ultimately ended fatally. Dr. Heaton remarks]

The interest of this case depends on the good illustration which it affords of the pathological fact that a continued state of partial asphyxia, from whatever cause, even though the immediate effects may be removed, produces such a state of congestion of the pulmonary vessels as may lead to very serious inflammation of the lungs. In the present instance, the asphyxia arose from the stupifying effects of a poisonous dose of opium, under which influence the respiratory movements were so far arrested as to produce for some time a state bordering upon asphyxia. Without going into any detail as to the theory of asphyxia, it will be sufficiently clear that when the movements of the lungs cease to be efficiently carried on, the black blood supplied to them fails to become duly aerated, and finds an increasing difficulty in making its way through these organs, and that this difficulty is increased by the feeble action of the heart, through whose nutrient vessels unoxygenated blood now circulates.

The effect of partial asphyxia in producing this state of the lungs is well illustrated by the old experiment of dividing the par vagum in a living animal. When this operation is performed, respiration ceases to be carried on as a reflex action, and the respiratory movements become entirely dependent on volition. Hence these motions are imperfectly effected. They are, however, still carried on, so far as regards the *evident* motions of the chest, though incompletely and laboriously; but there are, probably, other motions of the lungs, of a more intrinsic nature, not at all under the influence of volition, and effected exclusively as a reflex action; these are the contractions and dilatations of the bronchial tubes which the experiments of Dr. Williams (during the summer of 1840, and which were laid before the meeting of the British Association), sufficiently proved to be con-

tractile, and which probably take place in connection with those of the whole chest. This motion of the tubes, together with similar motions of the larynx equally involuntary, must be cut off when the par vagum is divided or paralysed, and this must prove an additional impediment to the respiratory function. The result of this is, that after death the lungs of the animal experimented on are found in a highly engorged state.

The paralysing effect of opium on the nerves produces a similar result; but, in this latter case, the voluntary movements are impeded, as well as the involuntary. Asphyxiating gases, and various other causes producing this state in a degree not immediately fatal, if continued in operation long enough to deprive the distended vessels of their tonic contraction, produce congestion of the pulmonary plexus. When recovery from the state of asphyxia is effected, the heart regains its full powers, and by its reaction upon the congested vessels, the congestion is converted into inflammation.

The effect of the more ordinary causes of pneumonia is very similar to this of asphyxia; congestion is first produced, which is converted into inflammation. The continued exposure of the surface to cold, constringes the external vessels, and drives the blood upon the internal organs; if any previous weakness or disease exists in the lungs, such as a deposit of tubercular matter, this organ becomes the seat of the congestion so produced, which the reaction of the heart converts into inflammation.

It is seldom, however, that the pneumonia, arising from asphyxiating causes, presents the characters of acute inflammation. The blood may have become so far stagnated in some parts that re-action cannot be produced, and congestion passes immediately into gangrene. Gangrene is by no means an ordinary termination to inflammation of the lungs. It was the opinion of Laennec that when this organ presents the appearances of both inflammation and of gangrene, it is the latter state which precedes and causes the former. This is now considered to be only occasionally, and not invariably the case. But those instances in which gangrene results from asphyxiating causes are just those in which this state is most likely to precede, and, by its irritating effects, to give rise to the inflammation in adjacent parts. Chomel has related cases in which gangrene of the lungs has resulted from exposure to asphyxiating gases, in which he supposes that the first or congestive stage of pneumonia has passed immediately into gangrene. It appears not improbable that such was the case in the present instance, for the symptoms were at no time those of *acute* inflammation, which is that form most likely to *terminate* in gangrene. Neither was there any attempt set up to circumscribe the disease; the walls of the cavity were themselves in a state of sphacelus, presenting no definite boundary. The loose tissue of the lungs is not favourable to such a limitation, and the low character of the vascular action was likewise opposed to the effusion of good lymph requisite to this process. The extremities of the vessels leading to the gangrenous part were,

however, closed, as was ascertained by examination, and proved by the circumstance that no hæmorrhage took place. The softened, almost purulent state of the muscular walls of the chest at one point, posteriorly, seemed as though an effort were then making to form an opening externally, for the discharge of the pulmonary abscess.

Besides these changes in the lungs, there was a considerable amount of tubercular disease, both of old standing, and in the form of miliary granulations of a recent date. The tuberculous affection, however, was of a slow and chronic character, and such as might not have seriously interfered with health for many years, though it may have served to aggravate the more acute affection hitherto considered.

The plan of treatment adopted in this case was locally antiphlogistic, combined with generally tonic and stimulant medicines, and regimen to support the strength, and enable the system, if possible, to throw off the putrid matter contained within the lung. But the symptoms were unfavourable from the beginning; and the extensive disease disclosed after death sufficiently accounts for the fatal result.

Med. Gazette, May 3, 1844, *p.* 134.

22.—ON THE USE OF IODIDE OF POTASSIUM.

By W. S. Oke, M.D., Southampton.

[Dr. Oke's experience in the use of this medicine is as follows. He has not found it efficacious in abdominal tumours, scirrhous induration, ulcerated carcinoma, lupus, indurated glands, scrofulous ulceration, lesions of the respiratory organs, enlargement of the liver, ascites, nor in encysted dropsy. On the other hand he has found it of great value in phagedænic, periosteal disease, and chronic rheumatism, some kinds of dyspepsia, spasmodic asthma, and chorea.]

Phagedœnic Ulceration. Case.—J. R., aged 38, by occupation a ferryman, in the spring of 1837, came from a distance of four miles to consult me for sore throat and difficulty of breathing. His respiration was stridulous and laborious, and he appeared as if struggling in the advanced stage of croup. On examining the internal fauces, I found the soft palate and tonsil-glands involved in extensive ulceration, which was also fast destroying the mucous membrane of the larynx, and threatening asphyxia. It appeared that the disease of the throat had existed for some months before it assumed its present alarming character. Almost despairing of any success I ordered the following treatment :—

Iodide of potassium	½ drachm
Tincture of orange peel.....	½ fluid ounce
Syrup of ginger.....	½ fluid ounce
Water.....	5 fluid ounces

Take half a fluid ounce diluted with mint water three times a day, and wash the throat frequently with the following gargle:—

Solution of chloride of calcium.....	½ fluid ounce
Honey of roses	½ fluid ounce
Water	5 fluid ounces

I requested to see him again in a few days, if he were well enough to come in; at the same time fearing he could not long survive so much laryngæal mischief. I was, however, most agreeably surprised to see him at the end of a week, in every respect better than could have been imagined after so short a trial of the iodide. The condition of the throat was very much improved, and his breathing tranquil and free; in short the medicine had, as it were, snatched him from imminent danger, and already placed him in comparative safety. The same treatment was continued for some weeks longer, when his throat was healed; and he left my care convalescent.

After this I lost sight of him till the spring of 1839, when he requested the favour of my going to see him at his own home. I found him in a truly pitiable condition. He was in bed, which he had kept for eight months, worn out with severe rheumatic pain, exhausted with intestinal hæmorrhage, pale, atrophied, and cachectic. He had been all the winter under the care of a medical gentleman, who had endeavoured in vain to relieve him.

Reflecting on the character of his former symptoms, and inferring that he was under the influence of the same disease, I at once put him under the iodine treatment that had been so successful before, adding to each dose of the iodide a few drops of the tincture of opium. In a few days his pains were relieved, and he began to rally; in three weeks he came down stairs, and in a few weeks afterwards paid me a visit, and represented himself well.

I saw this man on the 5th of March, in the present year, in the enjoyment of *full health*, five years having elapsed since his last attack.

Periosteal Disease. Case 1.—J. C., aged 40, a baker by trade, consulted me for an agonizing pain of a rheumatic character in the right tibia, which was considerably enlarged, and its periosteum thickened along the upper half of its anterior and inner surface. The pain had existed for *eight years!* it attacked him every night as soon as he was warm in bed, and had in a great measure long deprived him of sleep.

He is a married man; and solemnly assures me that he has contracted no syphilitic disease for the last twenty years, when he had a swelling of the groin. He told me that he had spent in vain almost all he possessed in medical advice, and had been once in a hospital with no better success; that he could bear his sufferings no longer; and, that in the event of my treatment being also unsuccessful, he had decided on submitting to amputation as a last resource.

I at once put him under the use of the iodide, of which he took five grains in solution three times a day, and continued the treat-

ment for six weeks; at the end of a week the pains left him and never returned; the enlargement of the tibia diminished, and he speedily recovered.

Case 2.—A medical gentleman, about 40 years of age, of dark hair and pale complexion, had been for several years tormented with severe aching pains of the limbs from a morbid condition of the periosteum. The disease was seated principally on the lower third of the right femur, where there was considerable nodosity with much tenderness; so severe was the pain, that he was under the necessity of taking large doses of opium every night to procure sleep, and enable him to perform the duties of his profession.

The long continuance of the disease had seriously injured his health, and reduced him to so great a state of debility and emaciation, as to cause alarm for the result, especially as peritoneal dropsy and anasarca of the legs had taken place, and as the urine was found to be albuminous.

Every remedy that could be suggested by his medical brethren, was tried to relieve him—mercury, sarsaparilla, di-sulphate of quinine, the sesqui-oxide of iron, the arsenite of potass in solution, the vinum colchici, &c., had each its fair trial; the veratrine, and also the belladonna, had been rubbed in externally, but all to no purpose: the dropsical symptoms had, however, been removed by the bi-tartrate of potass.

At this period of the disease, and early in the summer of 1837, I strongly urged him to try the iodide of potassium. Previously to his following my advice, by the persuasion of a professional friend, he took the iodide of iron, but without any marked advantage. He then commenced the hydriodate of potass in five grain doses three times a day.

In about a fortnight he was conscious of having derived decided benefit, which encouraged him to persist regularly in the treatment. The result was his pains gradually left him; the nodosities were absorbed, his sleep returned without the use of opium, his appetite improved, his breath lost the mercurial fœtor, he gained flesh, and in a few months was convalescent. I had opportunities of seeing this gentleman a long time after this, and his disease had not returned; on the contrary, he appeared to enjoy confirmed health.

Prov. Med. J. April 24, 1844, *p.* 40.

[Several good cases are next related on the efficacy of this medicine in chronic rheumatism and gout. The dose was generally four or five grains three times a day.]

When a paroxysm of gout has either subsided or been subdued by colchicum, it not unfrequently happens that it loiters in the system, sometimes plaguing one joint and sometimes another, not in sufficient force to fever the system, but just enough to confine the gentleman to his arm-chair, or to keep the man of business from his counting-house. Under such circumstances I have found the iodide

of the greatest service in clearing the system of the disease for a considerable time. I gave it in the following combination:—

Iodide of potassium	5 grains.
Sesqui-carbonate of soda	10 grains.
Camphor julep	1½ fluidounce.

This dose to be taken thrice daily for a month or six weeks.

[In certain forms of dyspepsia, apyrexial asthma, and chorea, it has likewise been found very useful. Dr. Oke attributes its good effects in these cases to its power of invigorating the system. He says]

A cachectic condition of the system, in whatever diseases it result, so long as those diseases be not *organic*, is in fact the true object of its curative agency; and this would best explain its success in the three last diseases related—dyspepsia, apyrexial asthma, and chorea Sancti Viti, all of which were at least associated with, and probably derived from, a morbid atonicity of the nervous functions involved. I have occasionally given four or five grains of blue pill every other night during the exhibition of the iodide, and I think it sometimes forwards its success.

The period necessary for a course of the iodide of potassium in "cachexia syphiloidea" is at least two months. In other cases the time must depend on the effects of the medicine. I have not had occasion in any case to give a larger dose than five grains, which has ever proved sufficient to accomplish the object in view, where the disease has been curable by this medicine. This dose has never produced any adverse effect; but in some instances, as in the first rheumatic case, it has thrown out an eruption peculiar to this remedy; and in others it has caused a bitter lupuline taste to rise up into the back of the fauces, which has annoyed the patient, and obliged me to suspend the iodide for a few days, or reduce the dose. What deleterious effects may result from large doses I must leave to be described by those who give them.

The iodide of potassium is always inadmissible where there is any febrile disturbance, or where the tongue is much coated. I have ever found it to disagree in such cases.

Prov. Med. Journal, May 1, 1844, *p.* 54.

23.—ON ERGOT OF RYE IN RETENTION OF URINE.

By James J. Ross, M.D., Cambusmore.

[An old man, aged 70, was suddenly seized with retention of urine, and was not relieved by the catheter till the lapse of nine days. Dr. Ross saw him for the first time three days after this, when he found him reduced, weak and low spirited, with complete retention of urine. There was no enlargement of the prostate, nor any obstacle to the introduction of the catheter, which was now introduced three times a day.]

The urine drawn off, though at times muddy and dark, was generally clear. On the 12th January, however, it became all at once as dark as port wine, evidently from bloody admixture. This was speedily checked by doses of alum gr. xv., with tinct. mur. ferri gtt. xx., every three hours, and it soon became again clear and healthy.

The general health and strength having suffered much, he was ordered a bitter tonic infusion three times a day. This was successful in restoring the appetite and increasing the strength, while the urine continued to present the characters of health; but not a drop came except by the catheter, which, in order to prevent any undue accumulation in the bladder, was now passed four times a day.

About the 10th February, he was able to leave his bed and sit up a portion of every day. He now commenced to take the ext. s. n. vomicæ gr¼. His health improved, he became stronger and stronger, till at last by the end of February, he was pretty well in all respects, except that the retention continued as perfect as ever—not a drop of water escaped, even alongside the catheter.

Seeing at this time a paragraph in *Johnson's Review*, for July, 1839, p. 221, mentioning some similar cases treated successfully by ergot of rye, I determined on giving it a trial. Accordingly, on the 2nd March, it was begun in the dose of 10 grs. given in a glass of warm water every morning. It was gradually increased to 15, 20, 25 grs., and ultimately ℥ss was given every morning as above. On the third day after the last mentioned dose was attained, there was great irritability of the bladder, constant desire to have the urine drawn off, and pricking pains in the hypogastrium, and the secretion was rather increased in quantity. Next day, a little water escaped through the urethra. The action of the medicine was kept up, and now, on account of the increased irritability of the bladder, the catheter was passed every four hours. Each day a little water was rendered *per viam naturalem*, chiefly in the morning, and always more readily when exposed to the cold open air than in a warm room; this little gradually increased, so that, by the end of March, about one half was passed naturally. The ergot was now only given occasionally, ℥ss every two or three days; and, without further details, suffice it to say, that the bladder gradually recovered its tone. By the 1st May, the patient had quite regained power over it, and was able to pass his urine as freely as ever. He then laid aside the catheter, and from that day to this, he has never had the least occasion to resume it.

Since the occurrence of this case, I have not had another opportunity of testing the ergot of rye; but it seems to deserve a more extensive trial than it has yet got in similar circumstances; especially where the retention occurs in old subjects, and depends on paralysis of the bladder, arising simply from previous over-distension.

London and Edinburgh Monthly Journal of Med. Sci., Jan. 1844, *p.* 43.

[Dr. Houston, of Dublin, confirms the experience of Dr. Ross, by the following case admitted into the City of Dublin Hospital, Dec. 14, 1843, and read to the Surgical Society of that city. The patient was obliged to urinate very frequently, sometimes every fifteen minutes, but left a quart of urine in the bladder, which he could not expel by voluntary power. There was no stricture of the urethra nor prostatic enlargement. It was clearly a case of paralysis senilis of the bladder, with catarrh of the mucous membrane. He was ordered a warm bath every second day, and to keep in bed. The urine was drawn off every six hours, a generous diet was given, and camphor and hyosciamus three times a day. Under this treatment he gradually improved, so that he could empty his bladder to about six ounces; but after this he made no improvement till the ergot was administered. Dr. Houston then gave up all medical treatment except the ergot, taking care, however, that the bladder was emptied regularly. Dr. H. says—]

I directed six grains of the ergot, in the form of pills, to be taken three times a day. For some days no change in the symptoms was observable; but after this time a manifest improvement began to exhibit itself in the diminution in the frequency of the call to urinate, the force with which the stream was propelled, and the completeness with which the bladder emptied itself. On the 25th he had been only called up twice, the night before, to pass water; he voided it in a tolerably arched stream, with comparatively little effort, without its being followed by any dribbling, and, as tested with the catheter, without leaving more than two ounces behind. The medicine was continued in the same doses up to the 30th of January, when every symptom of urinary disease was declared to have disappeared, and the man was able of himself so completely to empty his bladder, that a catheter introduced, after he had done, could not discover a single drop of urine. At this date he left the hospital, but returned in a week to show himself, when I found that the advantage gained under the use of the ergot of rye had become fully established. The man returned to the country perfectly satisfied with his cure.

Dr. Houston stated that during the period of the administration of this medicine there were no symptoms, as effects of it, which he could observe, except the gradual improvement in the tone of the bladder. He said that he had purposely abstained from commencing the use of it until the complications of the disease—viz., the catarrhal state of the bladder and the morbid condition of the urine consequent thereon had been abated by appropriate treatment; and he regarded this as a consideration of some moment in its use. The aim of the medicine being to improve the tone and energy of the *detrusor urinæ*, in fairness, that muscle should be as far as possible disembarrassed of all such contravening circumstances as can be got rid of, before its administration is embarked in. Dr. H. said that while he was disposed to attach much importance to the ergot of rye as a remedial agent in this case, he could not overlook the share

which the regular emptying of the bladder by the catheter had had in contributing to the cure, for he believed that no medicine given internally could well effect this object while the bladder is allowed to remain mechanically disabled from discharging its contents by over distension. But he could not overlook the fact that the case, under the ordinary treatment adopted, had come to a complete stand, and that it was during the use of the ergot during the latter periods that the restoration of the bladder to its natural functions was brought about. He would, therefore, recommend the use of the catheter simultaneously with the ergot in the treatment of such cases—provided, always, that the introduction of the instrument can be practised with ease to the patient, and without exciting rigors or other urinary disturbance.

Dr. Hargrave said he would mention a very interesting case, corroborating the testimony of Dr. Houston, in favour of the ergot of rye:—A girl, named Simpson, was admitted into the City of Dublin Hospital last summer, suffering from amenorrhœa and a supposed calculus in the bladder; also, not having passed water voluntarily for the last six years. Having examined the bladder most carefully, in which he was assisted by Dr. Beatty, no foreign body could be detected in it. Some small caranculæ were observed at the orifice of the urethra. This woman was treated in the first instance to produce a return of the menstrual secretion, and during a period of six weeks that she was in the hospital, passed no water voluntarily. She was ordered the ergot of rye in five-grain doses, morning and mid-day, with the intention of acting on the uterus. After she had taken six doses of the ergot she regained full power over the bladder, and was enabled to pass water without the assistance of an instrument, which she had not done for nearly six years previously. She continued to do so while in the hospital, and since her dismissal.

Dr. O'Beirne said he remembered a remarkable case of paralysis of the bladder at Jervis-street Hospital, occurring in an old man of seventy-five, but appearing fifteen years younger, and free from all other diseases. Various modes of treatment were employed. Among the rest, cold dashings upon the hips and abdomen, and the injection of cold water into the rectum; but all failed until he injected nearly a quart of very cold water into the bladder. From the moment that this was done he lost everything like retention of urine, and passed it as usual during the fortnight that he afterwards remained in the hospital. In this case there was no stricture, and no evidence of disease of the mucous membrane of the bladder. Such were the cases in which he would think the practice useful and safe.

Dublin Medical Press, Feb. 28, 1844, *p.* 137.

On Ergotine.—This name has been given by M. Bonjean de Chambéry to an extract prepared from the ergot of rye. It is prepared by digesting the ergot in distilled water, precipitating the gummy and albuminous principles by means of heat and alcohol,

and then evaporating to the consistence of a soft extract, which is the ergotine in question.

This extract is soft, of a brownish-red color, homogeneous, and it has an agreeable odour of roast meat; its taste is rather piquant and bitter, slightly resembling damaged wheat. It forms with water a limpid, transparent solution, of a deep red color. Five hundred parts of the ergot furnish seventy or eighty parts of extract.

The ergotine, says M. Bonjean, is a real specific against hæmorrhage in general. Whoever tries, he continues, my ergotine, will be surprised at the immediate effect produced in the most alarming menorrhagia; the most obstinate vomitings of blood yield in a very short time, and relapses are rare, especially when the physician takes the precaution of continuing its use some time after the cessation of the symptoms. In order to be convinced that the ergotine is the obstetrical principle, it is sufficient to treat the powder of the ergot with æther, until all the matter soluble in that liquid is taken up. All the poison is thus taken away, that is to say, all the oil of ergot and the resin. There remains a powder, which is not unctuous, but rough, like sand, without taste, without any poisonous action, and which powerfully excites uterine contraction in the dose of four or five centigrammes, in all cases of inertness of the womb, where the employment of ergot of rye is judged suitable.

The following formulæ have been proposed by M. Bonjean:—

> Ergotine, one gramme; common water, one hundred grammes; syrup of orange flowers, thirty grammes.

Let a mixture be made, to be taken by spoonfuls during the day for hæmorrhage, and every quarter of an hour in cases of want of uterine action, until the accouchement is ended. This dose is, in most cases, sufficient for an ordinary hæmorrhage; but when those alarming floodings come on which sometimes happen after the accouchement, the mixture ought to contain from five to ten grammes of ergotine, and to be administered by spoonfuls, at short intervals, until all danger has disappeared.

We cannot help agreeing with M. Bouchardat that the name of ergotine, which M. Bonjean has adopted, is inapplicable to a complex and ill-defined product, and that the separation of the poisonous from the medicinal principles, which M. Bonjean assumes, admits of no rigorous demonstration. There is no difference between a poison and a medicine, except in its doses, and in the propriety of its administration.—*Bouchardat's Annuaire de Therapeutique, &c.*, 1844.

Prov. Med. Journal, Feb. 10, 1844, *p.* 378.

[The secale comutum has been used successfully in *pulmonary hæmorrhage*, by Dr. Roussell, of St. Bartholomew's Hospital. In a case reported by him, after various remedies had been tried in vain, the patient bringing up blood by mouthfuls, skin cold, circulation extremely languid, a scruple of the ergot was administered every

hour for three times. The first dose checked the hæmorrhage, and after the last he expectorated but little.]

Medical Times, *Feb.* 10, 1844, *p.* 318.

24.—USE OF DIGITALIS IN MANIA AND EPILEPSY.

By Edmund Sharkey, M.D., Jersey.

[This gentleman published in 1841 an account of some cases of idiopathic epilepsy, in which very large doses of digitalis had produced excellent effects ; and he has since met with cases of mania combined with the former disease in which the same large doses of this medicine were equally beneficial. In the case of a young woman of 27, who had been the subject of attacks of idiopathic epilepsy from childhood followed by mania, Dr. Sharkey gave ℥ij. of the tincture prepared from the fresh leaf, after the woman had been attacked with one of these fits of mania for three days. She had been sleepless for three days and nights and talked incessantly : she had taken no food nor drink during this time. On the night after this dose of digitalis she slept soundly, awoke composed, and made a hearty breakfast. She continued to do well. In another case, that of a man aged 60, the epileptic fits occurred at intervals, being seldom absent above three days.]

Fits are generally preceded by flightiness of manner. Is more liable to them when constipated. Was at first subject to violent headach, not so at present. Maniacal fits, so violent as to require restraint, frequently alternate with the epileptic. Memory impaired ; enunciation embarrassed ; attacks sometimes accompanied by a cordiness of temporal arteries, and a tightness and fulness felt in the head.

[In this state ℥i. of the tincture of digitalis was administered three times a day. Next day this was omitted on account of constipation, and resumed the day after. As much as three drachms of the tincture were occasionally given at one time, always taking care to pay particular attention to the pulse during its administration. We find on examining the report, that although the fits were not actually checked, they were undoubtedly considerably mitigated by the medicine ; but we consider that it requires further experience before its efficacy can be depended upon. Its administration seems to have been accompanied with more or less nausea and vomiting, and this may in some measure account for its beneficial effects, as we find a still more remarkable power in the combination of tartarized antimony and opium in some forms of nervous fever, when the patient labours under excitement of the highest degree, almost amounting to convulsions. (See article 2, in Retrospect, vol. 7.)]

Dr. Sharkey says that he has endeavoured to prove that, when digitalis is administered in sufficiently large doses, the stage of excite-

ment becomes, as it were, evanescent, and the medicine acts, to all intents and purposes, as a direct sedative, and this even in cases where a confined state of bowels exists; contrary to the opinion of Dr. Halloran, who asserts that in this case it is a stimulant. It is, no doubt, desirable, but *not indispensable*, that they should be open; which it is well to know, in those cases where, in order to avoid the sad alternative of coercion, speedy relief is necessary, and where time could not be afforded for the operation of a purgative. He hopes that physicians of lunatic asylums, and other establishments presenting extensive opportunities of testing these views, may be induced to do so, as it would be an inestimable boon conferred on the unhappy class of beings to whose relief they minister, if any so easy means should prove a safe and efficacious substitute for circular swings and strait-jackets. Dr. Holland, in his Medical Notes and Reflections, states his opinion, "that one cause of the frequent failure of digitalis is its too timid administration;" and Dr. S. says that from these, as well as from many other cases which have come under his observation, he is more and more confirmed in the opinion which he formerly advanced, that epilepsy and epileptic mania, in obedience, it would seem, to a general law of disease, confer a tolerance of an appropriate remedy in doses which would be dangerous under other circumstances; and, in cases where the heroic dose is inadmissible, admit frequently of palliation by the administration of digitalis in doses hitherto little dreamed of in practice. It is quite certain that in the second case here recorded the digitalis repeatedly, and with certainty, controlled the maniacal tendency, which, in this case, was generally attended by more or less vascular excitement; while in the first case, in which no such concomitant symptom was found, its action seemed no less prompt and beneficial. It is likewise worthy of note, that the characteristic effects of the medicine on the circulation seemed to follow its sedative effect at an interval of twenty-four or forty-eight hours.

The subject of the second case has been taking regularly since the 8th inst. tr. digital.—spt. tereb. aa. ℥j. morning and evening.

Med. Gazette, Dec. 8, 1843, *p.* 305.

[Dr. Scott, of Liverpool, has been accustomed to use the same medicine in sthenic epilepsy. A paper of his on this subject will be found in the Prov. Med. Journal, April 3. 1844, p. 9.]

25.—*On Ischuria Renalis.*—[Dr. Theophilus Thompson has recorded an unusual example of complete interruption of the renal secretion, unattended with the urgent symptoms which protracted anuria usually induces. Death will generally ensue within three days of such an event: Dr. Prout thinks that five days will often elapse before coma takes place. In this case of Dr. Thompson's no urine was secreted for about 120 hours, and during the next 48 hours, only half an ounce was passed and the natural quantity was

not restored for a month, and yet no urgent cerebral symptoms at any time occurred. Dr. Thompson attaches some importance in the treatment of the case to the application of nitrate of silver. The final result of the case does not seem to invalidate the value of this opinion.

The case was that of a lady aged 45, who had for five years suffered in the region of the colon from frequent and severe attacks of pain. Jany. 28th, the secretion of urine was suddenly suspended so that only half a drachm was obtained on introducing the catheter. Nine ounces of blood were removed from the loins by cupping, and small doses of tincture of cantharides were administered. In the evening two drachms of turbid urine were passed. The loins were cupped again, and blistered: prussic acid, creosote, &c., were given, but still on the 3rd Feb., i. e. seven days after the first suppression, little or no urine had been voided. The nitrate of silver was now freely applied to an old issue on the loins which had lately been dried up, with the view of restoring it: in the evening a drachm of urine was discharged, and during the night 3½ ounces. The secretion became gradually restored. During the following month, however, she was attacked with an epidemic influenza and died.]

Med. Gazette, Jan. 12, 1844, *p.* 478.

26.—*The use of Cochineal in Hooping Cough.*—Dr. Cajetan Wachtl, of Vienna, treated nine children, suffering from hooping-cough, with cochineal, as recommended by certain English physicians. The remedy was administered in all stages of the disease; and its efficacy was so instantaneous and constant, that, notwithstanding the paucity of cases, Dr. Wachtl feels authorized to regard cochineal as a specific in hooping-cough. The following is his manner of exhibiting the remedy:—Take of cochineal, one scruple; sugar, one ounce.—Dissolve in six ounces of warm water. The dose is three tea-spoonfuls in the twenty-four hours.

The solution ought not to be kept longer than thirty-six or forty-eight hours, because after that time it assumes a brown hue, and a sour taste, which renders it unfit for use.—*Pharmaceutical Journal.*

Med. Gazette, Jan. 26, 1844, *p.* 560.

[This formula is objected to by Dr. Allnatt, inasmuch as the solution becomes acid in a few hours and unfit for use. He has employed the same remedy for 20 years in hooping cough with success. He says]

A peculiar acid is generated in the system by the disorder, which may be detected in the excretions from the stomach, and which, in my opinion, is the exciting cause of the spasmodic action of the glottis, producing the "whoop." It is obviously desirable, therefore, to neutralize this acrid condition of the first passages, in order to obtain the full advantage of the antispasmodic and anodyne properties of the cochineal; and for this purpose the *alkaline solution*

is invaluable. It is of a deep purple or violet hue, will keep a long time without change, and the active powers of the cochineal are not impaired by the combination.

The following is the form:

Take of Carbonate of Potassa, a drachm.
Cochineal, a scruple.
Boiling water, eight ounces.

The dose is a tea-spoonful three times a-day.

Pharma. Journal, March 1, 1844, *p.* 456.

27.—*Effects of Starvation on the Size of the Heart.*—[In Dr. Chossat's experiments on the effects of inanition, he has arrived at some important conclusions which may be useful in our treatment of enlargement of the heart.]

Having ascertained that all the animals killed by starvation lost four-tenths of their weight, four-tenths of the natural substance of their bodies, it became a matter of importance to ascertain what organs of the body had been chiefly attacked to supply this loss. M. Chossat enters into long details on this point, comparing the weight of the different organs with those of the healthy animal, and thus arriving at an approximate conclusion. The fat, as might have been expected, first disappears, but as this is not one of the essential organs of the body, no attention need be paid to this. It is the muscular system which bears almost the whole loss. The heart is liable to be rapidly attacked, and conversely, experiences, under the effect of abstinence, a very great loss of weight. Its state might always be judged of from that of the muscles, and their state might be judged of from the appearance of the heart.

These researches of M. Chossat prove that this softened state of the muscular system, far from depending on an inflammatory state, as is generally supposed at the present day, results, as he has so beautifully shown, from the agencies of life having attacked it, to supply the want of fuel to the respiratory function. These observations of M. Chossat also throw light on a fact never hitherto explained. In the process of training animals it has been a constant remark, that the treatment to which they are subjected causes a marked enlargement of the muscular structure of the heart. Now, if M. Chossat's experiments prove that, when an animal is starved, the muscular structures of the body are those which chiefly conduce to supply the wastes of the system, and that the condition of the external muscles indicates that of the heart, we are warranted to conclude, that the condition of the muscular structure of the heart will increase with that of the muscles under training, and the one observation serves to illustrate and explain the other.

Another important pathological appearance which it is necessary to notice, was, that the nervous system appeared to have lost none of its original volume or weight, though every other organ of the body was reduced both in volume and weight.

Edinburgh Med. and Sur. Journal, Jan. 1844, *p.* 159.

28.—*On Contagion.*—[Dr. Theophilus Thompson read a paper on this subject to the Medical Society of London.]

He commenced by remarking that the inherent difficulty of the subject was the greater because no conventional usage had as yet fixed the acceptation of the words contagion and infection. He should use the term contagion to express the subtle material by which disease is communicated. A contagious disorder is one capable of producing such subtle material ; an infectious substance, a substance retaining contagion, and an infected individual one imbued with contagion. After referring to the opinions of the anti-contagionists, and to the opposite extreme of those who have considered even phthisis, ague, and gout contagious, he observed that the existence of a contagious virus is not disputed in variola, syphilis, and hydrophobia, and is fairly recognised in some other diseases, such as measles and scarlet fever, for from nothing nothing could be produced. Dr. Thompson then noticed the opinion that some contagions are alkaline, and to be neutralised by acids ; others, depending on the presence of nitrogen, to be destroyed by chlorine ; and mentioned the statement that carnivorus animals, in a confined space, eliminate nitrogen with a deleterious effect, but herbivorus animals simply carbonic acid ; and he described the ingenious examination of the air of pestiferous rice-grounds, found by Moscati, of Milan, to contain a fœtid mucous substance, resembling that obtained from the wards of the hospital. He stated that moist still air was favourable to contagion, but that it was destroyed or checked by frost, and by *dry* heat above two hundred degrees, and often by storms, especially by the Harmattan ; easily imbibed, and conveyed by cotton and wollen goods, not by wood, glass, metals, or silk ; and he gave examples of its retention in woollen materials, and even in the walls of buildings. He was of opinion that the peculiar odour of contagious affections was probably associated with the virus, and that it was especially exhaled from the lungs and other mucous surfaces. He thought that the selection of particular races of men by certain parasites, corresponding with a similar selection by some contagious visitations, and the superiority of contagious diseases to ordinary laws, were favourable to the theory that the matter of contagion was organised and favoured in its development by the impaired vitality of the susceptible subject. The author proceeded to quote the opinion of various writers respecting the period of incubation of different contagions, and suggested that in scarlatina, measles, small-pox, and syphilis, the average period was perhaps about ten days, whilst in hydrophobia it varied from two weeks to two years. The infecting distance of scarlet fever and measles is greater than that of typhus, which does not ordinarily extend above three feet ; while plague, perhaps, requires contact for its communication. Dr. Thompson thought puerperal women rather more susceptible than other patients to any contagion to which they might be exposed, and gave some melancholy examples in support of that opinion. He referred to the moral, dietetic, and medical measures

calculated to lessen susceptibility, and dwelt on the powers of belladonna as a prophylactic in scarlatina, as supported by his own observations, and by very extensive experiments on the continent. Dr. Thompson concluded by enforcing the truth that no contagion could preserve its full virulence where free ventilation was effected, and that no district could be healthy where drainage and aeration were deficient. Owing to the neglect of these precautions our own country loses more subjects annually from fever than fell at Waterloo, and the duration of life in our second sea-port reaches only half its average. Medical men should take especial care to expose to free air the clothes they wear in the contagious chamber ; they should studiously impress the truth that the ministrations of humanity are safer in the well-ordered sick room than in districts where sanitary regulations are neglected, and should on the one hand endeavour to dissipate superstitious, paralysing fears, on the other to teach the limits and enforce the duty of a judicious, practical caution.

Dr. G. Bird also entered at some length into the question. He referred to some experiments of Professor Rossi, of Turin, on the blood of patients affected with an epidemic fever, made some few years ago. This gentleman had patients bled in the different stages of the affection, and having subjected the blood thus obtained to the influence of galvanic action, obtained not only hydrogen and oxygen, but also cyanogen—an element which never existed in healthy blood. In connection with this fact, it was curious that a chemist of some celebrity had lately suggested that cyanogen might be the source of malaria. With respect to the influence of chlorine in the prevention of contagion, it would appear that this influence had its defined limit, for it had been found that vaccine virus, intimately mixed with hypochlorates, had, when inserted into the system, succeeded in producing cow-pock, which went through the usual stages completely. He referred to the views of Sydenham on contagion, lately advocated with much ingenuity by Liebig, as worthy of attention.

Lancet, March 2, 1844, *p.* 772.

In Dr. Heaton's valuable reports of cases in University College Hospital, he reminds us of a symptom mentioned by Dr. Christison, which may often be of use to us in our diagnosis of diseases of the kidneys : it is that, except in cases of *diabetes mellitus*, a continued dropsical state, in connection with a large secretion of urine, may be regarded as a proof of the existence of granular disease of the kidneys. He explains the continuance of anasarca with an increased secretion of the watery parts of the urine in this disease, by considering that the diminished tenacity of the blood, from the diminution of its albumen and hæmatin, increases its tendency to transude.

Med. Gazette, Feb. 16, 1844, *p.* 644.

29.—*Effects of Camphor.*—M. Raspail in his valuable lectures on the physiology of health and disease, says on this subject,—During the

last five years, I have been in the habit of smoking and inhaling camphor, under the form of a cigar, both day and night; I have also placed every night, under my bolster, a certain quantity of purified camphor. My nights, instead of being agitated, have been passed in a calm and uninterrupted sleep. Indifferent dreams, recalling but the ordinary scenes of life, have succeeded to terrific nightmares, which used to torment me, almost every night, for at least a quarter of an hour. Whenever I awake, I chew from fifteen to twenty *centigrammes* (3 to 4 grains) at least of camphor, which I afterwards swallow, along with a small quantity of water; this sometimes amounts, in the course of the night, to as much as sixty *centigrammes* (12 grains) of camphor, which I have accustomed myself to swallowing; in the day-time, I often take a dose of similar strength; as an hygienic precaution, I also use frictions of camphorated spirits, when rising and going to bed, and whenever I perceive the least lassitude of spirit, or the slightest exhaustion of body. And with this inflammatory treatment according to the Brownian, the Rasorian, and physiological doctrines, I never was better in my life, nor, in fact, so well for so long a time together; I have entered on a new kind of existence; I have, so to speak, shed the old skin of disease; I have grown young again in physical and in moral strength; I am more disposed to labour, and am less inconvenienced than ever by it. I, therefore, consider myself justified in recommending others to partake of the benefits derived from this long and conclusive trial. My own family, as well as numerous patients, can bear out my testimony as to the immense advantages they have derived, from this medicinal agent. I should add that constipation is, generally speaking, produced by medicines of this class; this constitutes the reverse to their good effects, to the activity which they excite in the digestive organs, and the appetite to which they give rise.

Med. Times, Nov. 25, 1843, *p.* 100.

30.—*Antidotes.*—Messrs. Bouchardat and Sandras, from their experiments, consigned in the *Bulletin General de Therapeutique*, conclude that the antidotes *to corrosive sublimate*, are, a mixture of the powder of zinc and iron; the persulphuret of the hydrated peroxide of iron; *to copper*, powders of zinc and iron mixed; porphyrised iron; zinc filings; persulphuret of hydrated peroxide of iron; *to lead*, persulphuret of hydrated peroxide of iron; *to arsenious acid*, humid and dry hydrated peroxide of iron; humid persulphuret of hydrated peroxide of iron. This last named substance may be administered in cases where the exact nature of the poisons is not known. As to the *modus administrandi;* the powders of zinc and iron may be given in an electuary, and the peroxide of iron, and the persulphuret, in the form of a jelly, in which they may be kept in the apothecary's shop. The doses—℥ij. of the powders of zinc and iron are sufficient for ℈j. of acetate of copper; ʒij. of the magma of the persulphuret for ℈j. of acetate of copper, and grs. vj. of arsenious

acid; ℥iv. of the magma of the humid hydrated peroxide of iron, or ℥xxj. of dry hydrated peroxide of iron for grs. vj. of arsenious acid. Several glasses of tepid water must be given soon after their administration, and other means employed to produce vomiting. The sooner the antidote is given the greater the chance of success; from the effects of the acetate of copper the patient may recover, even should forty minutes elapse before its administration, but arsenious acid is absorbed much more rapidly.

Med. Times, Nov. 25, 1843, *p.* 102.

31.—*On the Unalterable Fulness of the Vascular System of the Brain.* Dr. Watson adopts the views of Dr. Kellie and Dr. Abercrombie respecting the unalterable fulness of the vascular system of the brain; but contends, with them, that variations of the *relative fulness* of the different classes of vessels, or of the vessels of different parts of the brain, together with the *varying pressure* on the cerebral substance thence and otherwise resulting, may very plausibly account for many of the phenomena of cerebral diseases. We have nowhere seen this hypothesis stated with greater clearness or made more probable.

Dr. Watson says,—But although the actual quantity of blood in the cerebral vessels may continue the same, it does not follow that the relative quantities contained in the arteries and veins should remain unaltered. . . . In a very plethoric condition of the body, the arteries which go towards the head partaking of the general fulness, it is not difficult to conceive that there will be an impulse or effort *tending* to the propulsion of an undue quantity of blood into the arteries *within the cranium;* and, under certain circumstances, actually producing a fuller state of those arteries at the expense of the cerebral veins. On the other hand, any sensible interruption of the return of the blood through the veins will virtually augment that impulse upon the arterial current which arises from the force of the general circulation. It is true that we cannot measure or weigh, so as to compare them together, the actual quantities of arterial and venous blood circulating at any period in the cerebral vessels. We never, therefore, can have any demonstrative proof that the kind of derangement, the alteration of balance that has just been supposed, does really occur; but as it evidently, in the nature of things, may occur, so many physiologists believe that it actually does take place, under various circumstances of disease. And taking for granted not only the possibility, but the positive existence of such a derangement, we are enabled to explain many remarkable circumstances connected with the pathology of the brain which might otherwise be altogether mysterious and inexplicable. We can understand how it may happen that a person shall fall down insensible, become completely comatose, and perish, and yet, on the examination of his brain, there shall be found no trace of inflammation or of softening, neither extravasated blood, nor effused serum, nor any change that our senses are capable of estimating. . . . But there is another principle by which many of the same derangements that leave no vestige behind them in

the corpse may, with *equal or greater probability*, be explained. I mean the principle of *varying pressure* upon the nervous substance. Physiologists say that the cerebral matter is incompressible. Upon what grounds this opinion (which lies at the bottom of the whole of the foregoing doctrine) may rest, I know not: but whether the brain be compressible or not—whether, that is, it be or be not reducible by pressure into a smaller compass—it is clearly capable of having different degrees of pressure applied to it, and of being pressed out of its ordinary form. We shall see hereafter that by pressure exercised from within, by the distension of what are called the ventricles of the brain, the convolutions on its surface are sometimes flattened, and the natural furrows between them nearly effaced. Pressure there certainly is in what I shall have to describe to you as *hypertrophy* of the brain. There must be considerable pressure on the nervous pulp when blood is poured out within it from a ruptured artery in a cerebral hæmorrhage. But the phenomena noticeable when a portion of the skull has been removed by the trephine, show very clearly that the encephalon sustains pressure from varying states of the circulation during perfect health. The surface of the brain, seen through the circular opening in the bone, is observed to pulsate, and to pulsate with a twofold motion. With every systole of the heart the surface protrudes a little, and it again subsides with the succeeding diastole. This shows that the tension of the arteries produced by every contraction of the ventricles of the heart, exerts a degree of pressure upon the contents of the cranium. . . . It is certain, then, that whether the cerebral pulp yields to it or not, there is a constant alternation of a greater and a less compressing force exerted upon it, during life. . . . It is equally certain that the compressing force may transgress its natural limits in either direction; may be too great or too little. The functions of the nervous centres may be perverted or lost when the pressure becomes excessive, or, on the other hand, when the pressure is insufficient. . . The pressure may cause fatal coma, and yet no evidence of its operation be left in the dead brain; in cases of *permanent* disease with *occasional* symptoms, accidental circumstances may from time to time determine an undue amount of compressing force or a deficient amount.

Brit. and For. Med. Review, Jan. 1844, *p.* 127.

32.—*Treatment of Delirium Tremens.*—By Dr. Watson. Although Dr. Watson agrees with all practitioners of experience, that opium, in some form or other, is the grand remedy; yet he properly warns his readers that it is not to be given indiscriminately, or trusted to alone. In some cases it must be administered cautiously, if at all; in others it must be combined with depletion in some form; and in others, again, with strong drinks; while, generally, it must be combined with nourishment. In the most common class of cases the following treatment is certainly that which will be found most effectual:

The opium must be given in full doses; and it must be fearlessly repeated if its desired effect does not follow. If the patients pass

many nights without sleep, they will die. I have tried various forms of opium ; and I am quite satisfied with morphia. Some persons, however, have not found it so successful as solid opium, or as the common tincture, laudanum. You may try the one or the other, or one after the other, if you please. No particular rules can be laid down that will suit all cases. After clearing out the bowels by a moderate purgative, you may give three grains of solid opium ; and if the patient show no inclination to sleep after two or three hours have elapsed, you may begin to give one grain every hour till he does sleep. Or you may prescribe corresponding quantities of the acetate of muriate of morphia, or of laudanum, or of the black drop, or of Battley's sedative liquor. His room, meanwhile, should be kept dark and quiet. If he sleeps for some time he will awake calmer and more sensible, perhaps perfectly so ; and you must withhold the remedy, or continue it in smaller or less frequent doses, according to the circumstances of the case. Sometimes this opiate treatment alone is quite enough ; sometimes it is not. You will meet with patients who resist very large doses of the drug ; but who presently sleep or become composed if you give some of their accustomed stimulus with it, ' a hair (as the vulgar saying goes) of the dog that bit them ;' if you put their opiate dose into a glass of gin or a pint of porter. Nervous *exhaustion* goes along with and augments the nervous irritability. . . . . If you learn that, notwithstanding the intemperate habits of the patient, his appetite for food has continued unimpaired and his digestion sound, you will, I believe, generally find that good nourishing diet, strong broths, for example, and the opium will suffice for the cure. But if the powers and natural sensations of the stomach have been injured and perverted, as is too often the fact, then a temporary recurrence to the habitual stimulus will frequently be necessary ; and it is well to ascertain in such cases what the stimulus has been, whether spirits, or beer, or wine, and to order it accordingly. Of course this is not to be continued after the patient has recovered from his delirium.

Brit. and For. Med. Review, Jan. 1844, *p.* 129.

33.—*Oleum Santonicæ, or Chenopodii as an Anthelminthic.*—[Dr. Monsarret, of Kibeggan, received a supply of this medicine from New York about three years ago, but only made use of it lately, when some obstinate cases, supposed to be owing to intestinal worms, came under his notice. He began with four to eight or ten drops on lump sugar or milk to a child, and so on in proportion. He says]—

Its effects surprised me, not having had much previous faith. In almost every case, I could observe innumerable quantities of lumbrici were discharged. In adult cases I have used it to the extent of half a drachm, or more, for several days, with success ; then, as a precaution, prescribing the following draught :—

℞ Ol ricini ℥vj. ; ol terebinth, ℥ij. ; spts. lavand. ℥j. ; Ess. M. pip. gtt. xx. M. Ft. haust.

Case of Bridget Daly, aged 38.—Of rather stout frame, but sallow complexion, her countenance anxious, and exhibiting much internal suffering. I attended her for a length of time as a dyspeptic, with its melancholy and discomforting train of symptoms, a disease, by the way, very common in Ireland, from the too constant use, I conceive, of farinaceous diet. After enjoining a strict regimen, and exhausting the list of bitter tonics, &c. &c., without relief, I at length thought of trying the oil, and having previously well freed the bowels, I ordered the following :—

℞ Ol. chenopodii, ℥ss. ; tereb. venet, ℥ss. Mel. q. s. ut. ft. bolus. M. St. ii. in die.

After the third dose, she brought me in a cloth a tape-worm, measuring four yards and a quarter long, which I have preserved.

There are many other cases in which I have tried this remedy with complete success.

Medical Times, Dec. 9, 1844, *p.* 140.

34.—*Selection from the Formulary of Biett on Diseases of the Skin.* (From the work of M. Cazenhave, translated by Dr. Burgess :—)

Internal Remedies.—Subcarbonate of soda, half, to one drachm ; barley-water, one pint. *Dose.*—Four glasses daily. *Use.*—Lichen ; prurigo ; chronic diseases with itching.

Decoction of dulcamara.—Dulcamara, half an ounce ; water, a pint and a half. Boil down to two-thirds. The quantity of the remedy may be increased to one ounce, or an ounce and a half. *Dose.*—Half a glass at first ; then a glass, morning and evening. *Use.*—Lepra vulgaris ; chronic diseases.

Decoction of orma.—Orma pyramidalis, four ounces ; water, four pints ; boil down to a half. *Dose.*—Two to four glasses a day. *Use.*—Scaly diseases.

Syrup of fumaria, twelve ounces ; syrup of viola tricolor, four ounces ; bisulphate of soda, two drachms. Mix. [M. Biett often employed this mixture in cases of eczema, lichen, and several chronic diseases of the skin.] *Dose.*—Two spoonfuls a day.

Syrup of fumaria, a pint ; bicarbonate of soda, three drachms. *Dose.*—Two tea-spoonfuls ; one before breakfast ; the other at bed-time. *Use.*—Eczema ; lichen ; prurigo.

Pearson's solution.—Arsenite of soda, four grains ; water, four ounces. *Dose.*—From twelve drops to a drachm or more. *Use.*—Most chronic diseases of the skin ; eczema, impetigo, lichen ; but chiefly in squamous diseases, lepra, psoriasis, &c.

Fowler's solution.—Arsenious acid, and carbonate of potass, of each seventy-eight grains ; distilled water, a pint ; alcohol, half an ounce. *Use.*—The same as Pearson's solution. *Dose.*—Three or four drops, gradually increased to twelve or fifteen.

M. Biett's solution.—Arsenite of ammonia, four grains ; water, four ounces. *Use.*—Same as above. *Dose.*—Same as Pearson's solution.

Larrey's syrup.—Sudorific syrup, one pint; bichloride of mercury, hydrochlorate of ammonia, and extract of opium, of each five grains; Hoffman's liquor, half a drachm. *Dose.*—Half an ounce to two ounces. *Use.*—Syphilitic eruptions. Syrup of mezereon, two ounces; balsam of tolu, four ounces; subcarbonate of ammonia, half an ounce. *Dose.*—A spoonful morning and evening. *Use.*—Constitutional syphilis.

Van Swieten's liquor.—Bichloride of mercury, eighteen grains; water, twenty-nine ounces; alcohol, three ounces. *Dose.*—A teaspoonful daily, in a glass of decoction of sarsaparilla. Each ounce contains a little more than half a grain. *Use.*—Secondary syphilis.

Powders. Pills.—Sublimed sulphur, magnesia, of each half an ounce. Make eighteen packets. *Dose.*—One daily. *Use.*—Chronic eczema; scaly diseases.

Proto-ioduret of mercury, twelve grains; extract of lettuce, two scruples. Make forty-eight pills. *Dose.*—One to four. *Use.*—Syphilis. Or,

Proto-ioduret of mercury, half a drachm; extract of guaiacum, one drachm; extract of lettuce, two scruples; syrup of sarsaparilla, q. s. Divide into seventy-two pills. *Dose.*—One, and then two daily. *Use.*—Syphilis.

Bichloride of Mercury.—Extract of aconite, six grains; bichloride of mercury, two grains; marshmallows powder, eight grains. Make eight pills. *Dose.*—One to four. *Use.*—Syphilis.

Deuto-ioduret of Mercury.—Deuto-ioduret of mercury, six grains; marshmallows powder, half a drachm. Make thirty-six pills. *Use.*—The same. *Dose.*—Two or three a day.

M. Sédillot's pills.—Strong mercurial ointment, one drachm; soap, two scruples; mallows powder, one scruple. Make thirty-six pills. *Dose.*—Two or three daily. *Use.*—The same.

M. Biett's pills.—Mercurial ointment, powdered sarsaparilla, of each a drachm. Make forty-eight pills. *Use.*—The same. *Dose.*—One to four daily. Or,

Phosphate of mercury, half a drachm; extract of fumaria, one drachm. Make forty-eight pills. *Dose.*—One to two a day. *Use.*—As before.

Aconite pills.—Extract of aconite, half a drachm; mallows powder, two scruples. Make forty-eight pills. *Dose.*—One or two morning and evening. *Use.*—Syphilitic eruptions; nocturnal pains.

Asiatic pills.—Arsenious acid, one grain; black pepper, powdered, twelve grains; gum arabic, two grains; water, q. s. Make twelve pills. *Dose.*—One or two a day.

Arsenite of iron. M. Biett.—Arsenite of iron, three grains; extract of hop, one drachm; mallows powder, half a drachm; orange flower syrup, q. s. Make forty-eight pills; each contains the one-sixteenth of a grain. *Dose.*—One daily. *Use.*—The two preceding formulæ are chiefly used in cases of chronic eczema and lichen; in the scaly diseases, lepra, lupus, and psoriasis.

Arsenite of soda. M. Biett.—Extract of aconite, one scruple;

arsenite of soda, two grains. Make twenty-four pills. *Dose.*—One or two daily. *Use.*—As above.

Hydrochlorate of iron.—Hydrochlorate of iron, twelve grains; gentian, in powder, twenty-four grains. Make twelve pills. *Dose.*—One to four daily. *Use.*—Employed with success by M. Biett in scrofulous eruptions.

Sulphate of iron. M. Biett.—Sulphate of iron, one scruple; powdered mallows, twelve grains; syrup, q. s. Make twelve pills. *Use and dose* the same.

Lond. and Ed. M. J. of M. S., April, 1844, *p.* 336.

35.—*Belladonna in painful Menstruation, &c.*—In a discussion in the Medical Society of London, Dr. G. Bird drew attention to that form of dysmenorrhœa which was unaccompanied by organic change or attended by the discharge of shreds from the uterus, and in which the pain was referred to the lower part of the abdomen, immediately over the uterus. In these cases he had found belladonna, properly prepared, of the greatest efficacy. When the patient was of a leuco-phlegmatic habit, pale and chlorotic in appearance, he ordered five grains of extract of belladonna and twenty grains of sulphate of zinc, to be divided into twenty pills, and of these one was ordered to be given immediately on the accession of pain, and repeated every two or three hours, until the pain ceased. When the patient was plethoric and of full habit he substituted ten grains of ipecacuanha for the zinc, and the pills were given in the same manner. In the intervals of menstruation purgatives were administered, with medicines tending to improve the general health. This treatment he had scarcely ever known fail.

Mr. Pilcher has found belladonna and ipecacuanha very serviceable in cases of hooping-cough. In neuralgia of the face morphia and quinine, and of the breast, belladonna or the liquor cinchonæ, were the best remedies.

Dr. Waller has used belladonna alone, both externally and internally, in cases of dysmenorrhœa, with temporary relief. He applies it externally in the form of a plaster of the simple extract spread on adhesive plaster. He has seen the belladonna in conjunction with hydrocyanic acid, in the proportion of one quarter to half a grain of the extract to three minims of Scheele's preparation, four or five times a day, of great benefit in cases of severe gastrodynia. He has found the belladonna also of great service in various anomalous neuralgic pains.

Dr. Garrard has used belladonna in the forms mentioned by Dr. Bird, and in the second set of cases, attended by plethora, has, instead of the ipecacuanha, often usually substituted colchicum. Belladonna and quinine he has found of service in cases of gastrodynia.

The President found the belladonna plaster very useful in cases of subcutaneous painful tubercle.

Lancet, March 23, 1844, *p.* 27.

36.—*Copaiva Sugar-Plums.*—Take of

℞ Balsam of copaiva, 460 grains ; Calcined magnesia, 18 grains.

Intimately mix these ingredients, and in about twenty-four hours the mass may be divided into seventy-two parts, which are to be rolled out between the fingers. These are to be covered with gum and sugar prepared in the following manner :

1st. A solution of gum arabic, containing a third of its weight of gum.

2d. White sugar, in powder.

Put the copaiva pills into a tinned-basin, of an hemispherical form ; pour in a little of the solution of gum, to moisten them ; then add some of the powdered sugar, and turn the basin so as to get the pills covered all over ; repeat this operation three times, and afterwards place the sugar-plums on a horsehair sieve, in a stove heated to 77° Fahr. The temperature of the basin, during the covering of the pills, should not be above 60° Fahr.—*Journal de Pharmacie.*

Pharm. J. April 1, 1844, *p.* 500.

37.—*Bloodletting* and other general antiphlogistic remedies, if they do not remove local inflammation, may render its products more injurious, by lowering their plasticity, and approximating them to tuberculous and other aplastic deposits. Thus chronic inflammation continuing after the full application of the antiphlogistic treatment, almost surely tends to produce degenerated changes of structure, over which remedial art has little power. In connexion with this subject, therefore, we see how desirable it is that inflammations should be removed before they become chronic ; and when there is a risk of their becoming so, it should be an indication to improve the condition of the blood by a tonic and nutritive plan, at the same time that local antiphlogistic measures may be necessary for the lingering inflammation.—*Dr. Williams.*

Brit. and For. M. Rev. April, 1844, *p.* 483.

38.—*New Researches on the Urine in a state of Health and Disease.* By M. Lehmann of Leipsic.—M. Lehmann's experiments on urine are chiefly valuable as having been made on himself, and as exhibiting the different composition of that fluid during an animal diet, a vegetable diet, a mixed diet, and a non-azotized diet. On the mixed diet he continued fifteen days, ate and drank moderately, but abstained from all fermented liquors. The whole urine was each day collected and examined. The result is stated below. He took an exclusively animal diet for twelve days, consuming thirty-two eggs each day. The whole quantity of urine passed daily was examined each day, and the average result is stated below. A purely vegetable diet was also continued for twelve days, but the non-azotized diet was only taken for two days. In the table both the quantities of solid matter passed daily are represented by

grammes (15 grains,) and the proportionate amount of salt and animal matter in that quantity of solid matter.

	Solid matter.	Urea.	Uric acid.	Lactic acid and salts.	Extractive matters.
Mixed diet,	67.82	32.498	1.183	2.257	10.489
Animal diet,	87.44	53.198	1.478	2.167	5.145
Vegetable diet,	59.24	22.481	1.021	2.669	16.499
Non-azotized diet,	41.68	15.408	0.735	5.276	11.854

It is interesting to remark on the above experiments, that, during the twelve days M. Lehmann was on animal diet,—taking daily 30.16 grammes of azote, no less than 25.623 grammes of this gas was excreted by the kidneys. The author draws the following conclusions from his experiments.

1. Animal aliments increase the solid matters of the urine; vegetable substances, but especially non-azotized aliments, on the other hand, diminish them.

2. Although the azote is a product of the decomposition of the organism, its proportion in the urine depends on the kind of food taken, seeing that food rich in azote increases greatly the amount of that which appears in the urine. In my experiments, the proportion of urea to the other solid matters was as 100 to 116 for the mixed diet; as 100 to 63 for the animal diet; as 100 to 156 for the vegetable diet; and as 100 to 170 for the non-azotized diet.

3. The quantity of uric acid depends less on diet than on other circumstances. The observed differences were too small to allow any thing to be attributed to the diet.

4. The compounds of proteine, and, consequently, the azote of the food, are absorbed in the intestinal canal. What is not used for the wants of the system is thrown off by the kidneys in the form of urea and uric acid. The kidneys are the only organs by which the system gets rid of its excess of azote.

5. The urine contains quantities of sulphates and of phosphates proportioned to the quantity of azotized matters which have been absorbed. The proportion of these salts increases remarkably by the use of nearly pure compounds of proteine.

6. In the same circumstances the quantity of extractive matter diminishes; but its amount is increased by the use of a vegetable diet;—a fact which proves the influence of a vegetable diet in the production of these matters in the urine.

7. During an animal diet the quantity of lactic acid diminishes, but then the greater portion of this acid is in a free state. The contrary happens during a vegetable diet; the lactic acid is in greater quantity, but in union with bases. During the use of a non-azotized diet most lactic acid is produced, but then it is in union with ammonia. From this it may be concluded that the lactic acid excreted with the urine is, for the most part, formed of non-azotized aliments which have been imperfectly assimilated. A part, however, may be produced from the decomposition of azotized matters of the system or of the food.

8. The kidneys do not only secrete certain constituent atoms of organs which have become unfitted for the purposes of life, but also the excess of nutritive matters absorbed into the system.

Ed. Med. and S. J., April, 1844, *p.* 486.

39.—*Use of Musk in certain Cases of Delirium.*—It is M. Recamier, we believe, who has most strongly advocated the use of this powerful antispasmodic in certain forms of delirium, occurring in the course of various febrile and inflammatory diseases. When pneumonia, as in certain constitutions, and in certain epidemics, is accompanied with marked symptoms of cerebral disturbance,—a very embarrassing complication—the use of musk, either alone or in combination with calomel, has been often found to be of decided advantage. It is also very useful in the delirium which not unfrequently attends the course of Erysipelas, and several other exanthemata ; more especially in small-pox, during the maturation and desiccation of the eruption.

Dr. Roche, of Strasburg, has recently published several very instructive cases in illustration of this practical point. The first was one of erysipelas of the face and head ; the second of gangrenous sore throat ; the third of scarlatina ; and the fourth of variola. In all these, the musk appears to have acted very beneficially. He adds : "I have employed it also in two cases of furious mania ; the violent agitation was arrested ; but no other good was produced. It completely failed in a case of grave typhoid fever, and also in one of acute bronchitis, accompanied with delirium, which occurred in a middle-aged man of very intemperate habits." He closes his observations with the following general remark :—"It appears to me that the administration of musk is indicated whenever, in the course of acute diseases, delirium supervenes without any distinctly appreciable cause, and the severity of which is not commensurate with that of the primary disease. In very many cases, I have had the satisfaction of witnessing cures, which I could not certainly have anticipated before my acquaintance with this most valuable remedy. The first effect, which it usually produces when successful, is to induce a quiet refreshing sleep, and a general tranquillizing influence over the entire body : sometimes it induces slight nervous twitchings in the eyelids, the extremities, &c."—*Journal des Connaiss. Med. Chir.*

Remarks.—Musk is unquestionably one of the most potent, and least fallible, antispasmodics that the Pharmacopœia contains : the only drawback to its general use is its expense. Fortunately assafœtida, galbanum, and good castoreum may very generally be substituted for their more costly analogue. In all cases of nervous agitation, unconnected with plethoric and inflammatory excitement, this class of antispasmodic medicines may be used with advantage. Camphor also is a very potent member of the same family ; and few compounds are more beneficial than pills composed of musk or assa-

fœtida and camphor,—to which a few grains of calomel, and also some extract of henbane, may often be most judiciously added. We have witnessed most pleasing effects from this formula in several cases of puerperal mania.—*Rev.*

Med. Chi. Rev. April, 1844, *p.* 511.

40.—*Electricity in Poisoning by Laudanum.*—Mr. Corfe, of the Middlesex Hospital, has related an instance of the good effects of electricity under these circumstances. A man was admitted, having taken an ounce and a half of laudanum on the preceding evening, six hours previously. "In the first instance I ordered the administration of the stomach pump, at which period, to all appearances, he was a lifeless corpse; the pupils were contracted to a pin-hole in size; the pulse was intermitting, and not more than 40; the respirations convulsively performed at intervals of half a minute; the face livid, and the extremities bluish and cold. After the stomach had been relieved of its contents, green tea, with ammonia, was injected therein; flagellation with thin splints and wet towels, the cold douche, turpentine stupes and sinapisms to his calves and abdomen, were applied in succession, without the least improvement in his condition. The bladder was relieved of six or eight ounces of light-coloured urine by the catheter. I then thought of a most powerful remedy, which was attended with extraordinary success; I allude to the electro-magnetic battery, conjointly with electricity, which was set to work upon him soon after four o'clock. The pulse became more steady, firm, and frequent; the respirations more indicative of resuscitation. Our powerful electrical machine was now got into full play before a large fire, and the jar filled, when some brilliant sparks and strong shocks were occassionally passed through his head, spine, thorax, and abdomen."—*Lancet, January* 27, 1844.

The result of this was, that the man opened his eyes, and his mouth too, abusing the operators for a pack of rascals who were "trying specimens" on him. But incomparably the most satisfactory effect was produced by giving him a shock on the tip of his nose. To use a phrase of the ring, he *rallied* wonderfully under this—a hint worth taking.

Med. Chi. Rev., April, 1844, *p.* 544.

41.—*On the Antidotes of Corrosive Sublimate, Copper, Lead, and Arsenic.*—By MM. Bouchardat and Sandras. By means of numerous experiments, first made in the laboratory and then repeated on dogs, MM. Bouchardat and Sandras have arrived at many interesting results relative to the antidotes of corrosive sublimate, copper, lead, and arsenic. All these are detailed at length in their long papers on the subject. Their conclusions were, that the following substances may be regarded as antidotes, and employed as such in medicine:—

As antidotes for corrosive sublimate.—A mixture of zinc and iron filings ; or powder of iron reduced by hydrogen ; or the moist persulphuret of the hydrated peroxide of iron.

As antidotes for copper.—A mixture of zinc and iron filings ; iron reduced by hydrogen ; porphyrized iron ; zinc filings ; or the persulphuret of the hydrated peroxide of iron.

As an antidote for lead.—The moist persulphuret of the hydrated peroxide of iron.

As antidotes for arsenic.—The moist hydrated peroxide of iron ; the dry hydrated peroxide of iron ; and the moist persulphuret of the hydrated peroxide of iron.

These experienced chemists add the following reflections :—This last preparation, the persulphuret of the hydrated peroxide of iron, possesses this superior advantage over all the rest, that it changes the nature of all the four poisons above noticed, and is especially applicable in those cases where we have not had time to find which of the poisons has been taken. As to the manner of administering these antidotes, and the doses which it is necessary to administer, the simplest means appear the best. The powders of zinc and iron may be suspended in any electuary, or they may be swallowed in wafer paper. The magma of the hydrated preparations of iron may be swallowed in the form of jelly, in which they are procured from the druggists. Several draughts of lukewarm water ought to follow the antidote, and the fauces be tickled with a feather, to excite vomiting and the expulsion of the poison. The efforts at vomiting scatter more effectually over the stomach the antidote which is administered.

As to dose, the experiments proved that 100 grains of the powder of iron or of zinc sufficed to prevent any bad effects from 15 grains of the acetate of copper. Fifteen drachms of the moist magma of the persulphuret were required to produce the same effect with the same dose (15 grains) of the acetate of copper. To act as an antidote to 4½ grains of arsenious acid, 15 drachms of the moist magma of the persulphuret, or 30 drachms of the moist hydrated peroxide of iron, or 20 drachms of the dry hydrated per oxide of iron, were required.

With regard to the time when these antidotes can be administered with advantage, in so far as the acetate of copper is concerned, the lapse of 40 minutes from the time of swallowing the poison ought not to be regarded as a sufficient reason for not administering the antidote ; but arsenic is more quickly absorbed. Nevertheless, the antidote should always be administered, because, though it will not neutralize what is absorbed, it will prevent its further absorption, by decomposing what remains in the stomach.

Edinburgh Med. and S. J. April, 1844, *p.* 497.

42.—*The Hæmospasic Method of Treatment.*—Many medical men may perhaps know the meaning of the word *Hæmospasia*, although the merits of the practice, which it denotes, have been canvassed at great length some years ago in the Academy of Medicine, and

valuable reports from the pens of MM. Magendie and Serres have been made, on two different occasions, upon the subject. The Monthyon prize has been twice awarded to the talented author of the discovery, M. Junod; and the Administrative Council of the Metropolitan Hospitals have expressed their marked acknowledgment of the great benefits which he has bestowed by his discovery on therapeutic medicine. He has uniformly proceeded with a truly scientific caution in introducing his new remedy to public notice. Not content with trying it on numerous occasions in his own practice, he has sought the opinion of his brother-practitioners, and solicited their frank and unbiassed judgment. In this respect, he has acted very differently from certain medical men of our times, whose only ambition seems to be to win popular applause, and a rich harvest of fees. The very quiet and unobtrusive course, which M. Junod has followed upon all occasions, will partly account for the comparatively little attention that has been paid to his ingenious discovery.

Hœmospasia (from ἁιμα sanguis, and σπαω traho, sugo), is a means of producing a powerful *revulsion* of the blood from one part, and an equally powerful *derivation* of the blood to another part, of the body, by removing the atmospheric pressure from a large extent of surface, as from one or both extremities at the same time. It is, therefore, so to speak, quite the same as dry-cupping; only on a large scale. "To produce an intense *raptus* of the blood from the deep-seated to the superficial parts of the body, to dissipate congestions, to counteract morbid fluxionary accumulations, and to relieve any organ or organs that may be oppressed with a surcharged circulation—such is the aim and object of the new therapeutic agent. By its means, we are enabled to withdraw, or displace, or accumulate, or concentrate a part of the mass of blood, according as the varying circumstances of the constitution, age, existing disease, and so forth, may render expedient."

In 1835, M. Magendie alluded to its great utility as a certain method of instantaneously attracting or *deriving* towards the extremities the blood, which would otherwise become congested in the viscera of the great cavities of the body;—and this, too, without causing any direct loss of the vital fluid.

That the remedy is one of no ordinary activity, is sufficiently evidenced by the immediate effects which it often produces. The face is rendered pale; the pulse becomes slower than it was before; at times there is a tendency to syncope; and often there is a good deal of disturbance of the gastric and intestinal function. All these symptoms are referrible to the powerful derivation of the blood from the heart and great blood vessels towards the extremities of the body.

As patients usually express their feelings, under the operation of remedies, much better than any medical writer can describe them, it is always well to note such observations down at the time. One said that, when the *hœmospasic* apparatus was applied, he felt as

if he was quite deprived of his blood; another compared the sensation as if he had to bear the weight of ten foot-baths all at once; while a third observed that his life seemed to descend to his feet.

Hæmospasic revulsion has been employed with useful effects in a variety of inflammatory and congestive diseases. When the object of the physician is to divert the flow of blood to any internal part, and to relieve the accumulation, without having recourse to sanguineous depletion, no remedy is more worthy of trial than M. Junod's apparatus. How important is it to be able to do this in many cases, where the patient is of a delicate constitution, and where the system, if once much reduced, will inevitably be long of recovering its lost energies! Under such circumstances as these the hæmospasic method is a truly precious resource. The blood is withdrawn from the suffering part, and yet not a drop of it is lost. It has, however, been objected that, when the apparatus was removed, there would be forthwith a violent reaction, and that then the blood would be propelled with greater force than ever to the seat of the disease, so as perhaps to produce a more intense congestion there than had existed even at the first. But this objection, though seemingly plausible, is contradicted by the results of experience: for, as the hæmospasic injection or plethora takes place chiefly in the capillary vessels, the tumefaction, thereby induced, is found to subside very slowly and gradually. We have seen the apparatus applied in a great many cases, and have never yet observed the slightest inconvenience from its adoption in a single instance. As a matter of course, judgment and experience are as necessary for rightly using this, as they are for the employment of any other potent remedy. M. Junod having made no secret of his method, it has been indiscriminately recommended by not a few practitioners in this metropolis, who are ever on the look out for any novelty, and who are much more likely to be adepts at *drawing* the fees than the blood of their patients. We cannot do better than close these remarks with a paragraph from his little work, entitled *Methode Hæmospasique et Appareils du Docteur Junod.* 1843. *Paris*:—"It is not a question—and this remark I make most emphatically—of a secret remedy, of a mercenary industrialism, or of any mere speculation whatsoever. It is a remedial method, based on the acknowledged laws of animal physiology, and tested by numerous experiments and observations. I address myself only to men of education and practical knowledge, and solicit of them a patient and cordial examination of my assertions. With confidence I may say, alike to my professional brethren and to the patients, to the most censorious physician as to an enlightened public, come and see, examine and judge for yourselves." *Gazette Médicale.*

Remarks.—On this subject, Dr. Johnson remarks, that the hæmospasic method is, in his opinion, "rather an ingenious suggestion than a useful remedy. In certain cases of chronic maladies, it may doubtless be used with advantage, just as any of the other medical novelties of the day not unfrequently are; but it is not likely ever to

be so popular as they, from the inconvenience of its application, and the uncomfortable feelings which it often produces at the time. Let it not be supposed that we class M. Junod with the *puffing* doctors of the day—whether their panacea be cold water or steam baths, pills by the dozen or fractionary parts of a grain. He is far too honourable and honest a person to descend to anything unworthy of a professional gentleman. Nevertheless, we must protest against any laudation of his blood-attracting method in one or two diseases, in the treatment of which we find that it is recommended both by himself and others. For example, we are repeatedly told that it may supersede the employment of blood-letting in many cases of inflammation. What !—is there no other morbid element in this generic disease, save and except only the existence of a greater quantity of blood in the affected part than usual ?—and is the human body so entirely a mere hydrostatic machine that we can lessen or increase at will the actual quantity of blood in any part by simply regulating the amount of the atmospheric pressure upon it ? Such a doctrine savours, we think, more of the seventeenth than of the nineteenth century ; more of the times of Borelli than those of M. Andral. Has not the latter gentleman, within the very last twelve months, been teaching his countrymen—for, thanks to British sagacity, the instruction was not required on this side of the Channel—that there is an intimate and essential change in the proportion of the constituents of the blood in all inflammatory diseases ? The relative proportion of the fibrine is considerably higher than in health, while that of the red globules is but little, if at all, affected. If such be the case, does it not follow, as an obvious inference, that the merely diminishing of the actual quantity of blood in any part, can never reasonably be expected to cure an inflammation of that part ? We have often—long before the publication of Andral's recent researches on hæmatology—urged this argument, as one of decisive and insuperable force, against the Broussaian doctrine of recommending excessive bleeding in Typhoid fever, and other falsely-called inflammatory diseases. It is not the quantity of the blood, so much as its altered quality, that is at fault, alike in the pyrexiæ and in the phlegmasiæ ; and it is only by paying due attention to the changes in the condition of the fluids, as well as of the vital forces which move them, that a safe and rational system of therapeutics can be established. Such is the basis on which modern humoral pathology must be built."—*Rev.*

Med. Chir. Rev., Jan. 1844, *p.* 231.

43.—*Tobacco taken moderately, &c.*—Tobacco taken moderately is a condiment, to which some people inure themselves. Its modes of use are by smoking, by chewing, and by snuff-taking ; in whatever form it is employed, the tobacco acts evidently, by a property, the base of which is formed by ammonia. In fact, if we moisten common tobacco with a little ammonia, we give to it a flavour which increases its value. Pound some walnut leaves with potass in a heated mortar, and then place them in a drying stove, and you will have a powder

very similar to tobacco, for the purpose of smoking, and which has even a stronger flavour, especially if a few drops of ammonia be added to it; and there is every reason to believe that common tobacco is thus adulterated to a great extent. The walnut leaves may be replaced by those of the potato, henbane, hellebore, aconite, by the grains of *elaterium* and of colocynth, &c.—*M. Raspail.*

Med. Times, Oct. 28, 1843, *p.* 43.

44.—*Infrequency of Phthisis in Marshy Countries.*—At a meeting of the Academy of Medicine, on the 7th of November, a letter was read, addressed to the President by M. Nepple, on the infrequency of phthisis in marshy districts. After being read by the Secretary, it was referred to the committee appointed to inquire into the antagonism supposed to exist between phthisis and marsh-fevers.

M. Olliver (of Angers,) requested the attention of the academy to this letter, which seemed to him to contain important facts. It confirmed what Brera said, some years ago, on the infrequency of phthisis in Venice, which, he too, attributed to the emanations from the lakes.

During Dr. Olliver's stay at Venice, he endeavoured to verify this fact; and he found that there were not more than seven or eight phthisical patients among twelve or fourteen hundred annually admitted into the hospitals of the town. Almost the whole of the remainder were suffering from intermittent fever or rheumatism.—*Gazette Médicale, Nov.* 11, 1843.

Med. Gazette, Dec. 1, 1843, *p.* 287.

[Some very remarkable cases confirming the above will be found in the "New York Journal of Medicine and Surgery for January, 1840, p. 73," and an abridged account of the same will be found in article 9 of Retrospect, vol. 1. This view of the case, however, is not agreed to by every one, as will be seen in a note addressed to the *Gazette Médicale*, by Dr. Gouzée, chief physician to the Military Hospital, Antwerp, who says]—

The partizans of this opinion affirm that phthisis is unknown in countries where marsh miasma reigns. This may be true with some, but certainly is not the case at Antwerp, where, though intermittent fever is endemical, phthisis is very prevalent. Thus, from 1834 to 1842, of 453 deaths at the Military Hospital, 123 were caused by phthisis, or one in three and two-thirds. During the first six months of 1843, of 17 deaths, 9 were from phthisis, or more than one-half, though intermittent fever was more prevalent than usual. Moreover, no doubt can exist as to the nature of the disease, the *post mortem* examinations having demonstrated the existence of tubercles. The same remark is applicable to the inhabitants of the town; therefore, the law announced by Dr. Boudin is not without an exception; for in Antwerp, phthisis and intermittent fever reign simultaneously, and the one does not prevent the development of the other.

Med. Times, Dec. 16, 1843, *p.* 144.

45.—*On Blistering by Nettles in Measles.*—M. Trousseau recommends the free application of nettles to the surface of the skin in cases where measles or other eruptive diseases have receded, and lead to the production of severe symptoms. He has seen this means succeed when every other had failed. In the case of a girl on whom the eruption of measles disappeared, producing a severe attack of bronchitis, leeches and active emetics failed to bring back the eruption or ameliorate the symptoms. Her whole body was then freely threshed with a bunch of nettles, and, within a few hours after, the eruption had fully returned, and with it every disagreeable symptom disappeared.

Ed. Med. and S. J., April 1844, *p.* 488.

46.—*On the Action of different Medicines on the Mental Faculties.*—By Professor Otto. All stimulant and exciting medicines increase the quantity of blood that is sent to the brain. If this quantity exceeds a certain amount, then most of the faculties of the mind become over-excited. Nevertheless the degree of this action is observed to vary a good deal in different cerebral organizations; and it is also found that certain stimulants exercise a peculiar and characteristic influence upon special or individual faculties. Thus ammonia and its preparations, as well as musk, castor, wine, and ether, unquestionably enliven the imaginative powers, and thus serve to render the mind more fertile and creative. The empyreumatic oils are apt to induce a tendency to melancholy, and mental hallucinations. Phosphorus acts on the instinct of propagation, and increases sexual desire; hence it has often been recommended in cases of impotence. Iodine seems to have a somewhat analogous influence; but then it often diminishes, at the same time, the energy of the intellectual powers. Cantharides, it is well known, are a direct stimulant of the sexual organs; while camphor tends to moderate and lull the irritability of these parts.

Of the metals, arsenic has a tendency to induce lowness and depression of the spirits; while the preparations of gold serve to elevate and excite them. Mercury is exceeding apt to bring on a morbid sensibility, and an inaptitude for all active occupation.

Of narcotics, opium is found to augment the erotic propensities, as well as the general powers of the intellect, but more especially the imagination. Those who take it in excess, are, it is well known, liable to priapism. In smaller doses, it enlivens the ideas and induces various hallucinations, so that it may be truly said that, during the stupor which it induces, the mind continues to be awake while the body is asleep. In some persons, opium excites inordinate loquacity; Dr. Gregory says, that this effect is observed more especially after the use of the Muriate of Morphia. He noticed this effect in numerous patients, and he then tried the experiment on himself with a similar result. He felt, he tells us, while under its operation, an invincible desire to speak, and possessed, moreover, an unusual fluency of language. Hence he recommends its use to those who

may be called upon to address any public assembly, and who have not sufficient confidence in their own unassisted powers.

Other narcotics are observed to act very differently on the brain and its faculties from opium. Belladonna usually impairs the intellectual energies; Hyosciamus renders the person violent, impetuous, and ill-mannered. Conium dulls and deadens the intellect; and Digitalis is decidedly anti-aphrodisiac. Hemp will often induce an inextinguishable gaiety of spirits; it enters into the composition of the intoxicating drink which the Indians call *bauss*. The use of the *Amanita Muscaria* is said to have inspired the Scandinavian warriors with a wild and ferocious courage. Tobacco acts in a very similar manner with Opium, even in those persons who are accustomed to its use; almost all smokers assert that it stimulates the powers of the Imagination.

If the psychological action of medicines were better known, medical men might be able to vary their exhibition, according to the characters and mental peculiarities of their patients. The treatment of different kinds of monomaniacal Derangement also might be much improved; and it is not improbable but that even a favourable change might be wrought on certain vicious and perverse dispositions, which unfortunately resist all attempts at reformation, whether in the way of admonition, reproof, or even of correction.—*Zeitschrift für die gesammte Medicin.*

Med. Ch. Rev., April, 1844, *p.* 489.

47.—*Incontinence of Urine and Enuresis cured by Electricity.* By M. Froriep. Incontinence of urine frequently comes on after severe rheumatic and gouty affections. In many cases, these affections have been referred to affections of the spinal marrow; but M. Froriep denies this, as any affection of the lower portion of the cord, which would cause paralysis of the bladder, would at the same time produce some paralytic symptoms in the voluntary muscles of the lower extremities. He refers it, therefore, to a local affection of the bladder itself, to an affection of the nerves, or of the muscular fibre, or of both. Taking this view of the question, he resolved to try the effect of the local application of electricity. A metallic stylet, terminating in a button point, is introduced into the bladder, with the aid of a gum catheter, which envelopes the whole but the button point. The handle of the stylet is then connected with one of the wires of an electro-galvanic battery, while the extremity of the other wire is pressed against the pubes. The electric current is passed through the bladder for a quarter of an hour each day. The bladder in general retains the urine better the very first day after the application; but the application requires to be renewed at intervals, till the bladder recovers its full power. Several cases are related of this affection, in people from 30 to 40 years of age, in whom the affection was completely removed by the electricity.

M. Froriep has found this agent equally powerful in removing the weakness on which the enuresis of children depends. In some

cases, he found one application of the electricity remove the disease; in others, it required to be repeated at intervals. He found that, in weakly children, a few doses of iron confirmed the cure.

Ed. Med. and S. J., April, 1844, *p.* 491.

48.—*Electricity in poisoning by Strychnine*—The following statement, *if true*, is very remarkable, and deserving of further investigation:—

M. Duclos has instituted a series of experiments on rabbits, dogs, and guinea-pigs. He poisoned these animals with strychnine and brucine, and then electrified them; and found that, on application of the negative electricity excited by means of an electrical machine, the symptoms of poisoning subsided, and the animals were saved; the positive electricity, on the contrary, increased the muscular contraction produced by the poison, and hastened death. Animals which had been poisoned with arsenious acid could not only not be saved by electrifying them, but were killed sooner, whether positive or negative electricity was employed.

Lancet, April 13, 1844, *p.* 102.

49.—*Acetous Extract of Cantharides.*—M. Soubeiran has published the formula for a blistering preparation, which is a good deal used in many parts of Germany. It is prepared by digesting with a gentle heat four parts of coarsely powdered cantharides, one part of concentrated pyroligneous acid, and sixteen parts of alcohol, filtering the mixture, and slowly evaporating the fluid. The product has the consistence of butter, and if smeared on a piece of paper, and applied to the skin, will be found to raise a blister in a short space of time. The consistence of this preparation, and more especially the presence of the acetic acid, suffice to prevent the cantharidine from crystallizing—a result which always takes place with the ethereal extract, and constitutes a great objection to its use.

Medical Times, Dec. 16, 1844, *p.* 153.

50.—*Prepared Sevum.*—Under this title a very elegant and valuable preparation has been for some time before the public. It is employed in the manufacture of mercurial ointment (unguentum hydrargyri), and possesses the singular property of *immediately* extinguishing the globules of metallic quicksilver, and producing the necessary degree of oxidation, without at all interfering with the *intentions* of the Pharmacopœia. The process hitherto followed for the preparation of this ointment has been long complained of as *tedious* and *unsatisfactory*. The operation of "*killing the silver*," as it is technically called by the manufacturer, was frequently very imperfectly accomplished, and, at other times, various ingredients were added, which not only injured the quality of the article, but totally altered its *nature* and *medical virtues*. I have examined various samples of the "prepared sevum," and find it perfectly free from any acid, resi-

nous or metallic addition, that might be an objection to its use. It resembles in every point very pure suet, as its name implies, and produces a finer article of ointment, both as to colour and quality, than by the old and laborious process of patient trituration. I have now, for some time, recommended the use of ointment prepared with this article, and have found it more *regular* in its operation, and slightly stronger, than that made on the *old* plan. Several of my professional friends also tried the ointment with the same results.

Strong Mercurial Ointment.—℞. Prepared sevum, 1 ounce or part, quicksilver, 7 ditto, mix in a warm mortar, then add lard (softened with heat), 13 ounces or parts, mix well.

Weak Mercurial Ointment.—℞. Prepared sevum, 1 ounce or part, quicksilver, 7 ditto, lard (softened), 3½lbs., or 56 ditto, as before.—*Cyc. of Practical Receipts.*

Med. Times, Dec. 23, 1844, *p.* 165.

51.—*Therapeutic properties of the Chloride of Silver.*—The chloride of silver, which was formerly recommended by Poterius, as an anthelminthic and hydragogue; by Hoffman, as an evacuant of phlegm in dropsy and melancholy; by Tachenius, as an excellent remedy, combined with the sulphuret of antimony, for mania, melancholy, and epilepsy; and, lastly, in modern times, by Professor Serres, for syphilis—has been employed in various cases by Dr. Perry. He declares that he has found it preferable to the nitrate of the same metal, inasmuch as its effects are more certain, its application easier, and it is less disposed to decompose, and free from any disagreeable taste.

The chloride of silver acts best in the form of pills; nevertheless, for young children, it can be prescribed in the form of powders, or suspended in some appropriate syrup.

The use of this salt inwardly is not attended with the risk of the green or brown discoloration of the skin, as with nitrate of silver.

Dr. Perry has prescribed the chloride for epilepsy, he has also given it in chronic dysentery; under its influence the number of stools and other symptoms have diminished; he has used it also in suppressed menstruation; and, lastly, in the secondary form of syphilis.—*American Medical Intelligencer.*

Prov. Med. J., Dec. 2, 1843, *p.* 182.

52.—*Treatment of Sciatica by Irritation of the Foot.*—M. Caffe, at a meeting of the Societe Médicale d'Emulation, on October 3, said that M. Quadri, the celebrated professor of ophthalmology, in the University of Naples, told him that Dr. Petrini, director of the surgical clinique of Aquilla, a town of the Abruzzi, published about six years ago a memoir, in which he made known a mode of treatment for sciatica. This mode consisted in applying an olive-shaped cautery, heated to a white heat, between the little toe of the diseased limb and the one next to it. This cautery ought to be applied to

that part where the nerve bifurcates to furnish its collateral branches to the two last toes; and ought to be kept there for five or six seconds. The wound should then be dressed with simple cerate, and allowed to cicatrize.

A Capuchin monk, affected with sciatica, carried with him in his travels through various towns an instrument for this purpose.

Professor Quadri has often repeated this operation at Prati, in Tuscany, with great success.

These circumstances were brought to M. Caffe's memory by reading an article on the treatment of sciatica, in which mention was made of a woman of Cassano who had a great reputation for her success in its cure. The means which she employed consisted in the application of a certain herb to the foot, which produced a sore. Various physicians, astonished at the results produced, took the trouble to find out that the remedy in question was the leaves of the *ranunculus sceleratus*, which, as every one knows, is a powerful vesicant.

Dr. Fioravante has employed common blistering plaister to the same part, with the happiest results.

Prov. Med. Journal, Dec. 9, 1843, *p.* 202.

53.—*Paraplegia Cured by Strychnine.*—A journeyman, aged fifty nine, of sanguine temperament, subject to rheumatic pains, had experienced, about a year ago, his last attack of rheumatism, which had left in the cervical region of the spine a considerable swelling, extending to the left side of the throat, where several tumefied lymphatic glands appeared. The movements of the head were difficult and constrained. In about six months' time he perceived a remarkable weakness of the upper and lower extremities. He found more and more difficulty in walking, and could scarcely grasp things with his hand. He felt some formications in his limbs, but no contraction. The sensibility appeared to be natural.

The day after his entrance into the hospital (la Charité) it was discovered that he was not able to void his water, and his stools passed involuntarily; this he ascribed to the fatigue of his journey. A cautery was applied to each side of the tumour in the neck. Pills of strychnine were prescribed, the dose of which was raised progressively from one-eighth to one-third of a grain. At the end of five days from the commencement of this treatment he began to feel twitchings in his lower extremities. On the eighth day all the movements were entirely restored; there did not remain the least trace of paralysis either of the extremities, of the bladder, or of the rectum. A short time afterwards he was discharged perfectly cured.—*L'Expérience, Oct.* 26, 1843.

Prov. Med. J., Nov. 18, 1843, *p.* 141.

54.—*Treatment of Sciatica.*—M. Fioravante, hearing frequently of the successful cures of sciatica wrought by a woman of Cassano, by means of irritating applications to the heels, endeavoured to attain

the same effects by employing preparations of cantharides; but his first attempt failed, on account of the thickness of the epidermis on the heel, which lessened, or even altogether prevented, the action of the vesicant. He then thought of cutting away the epidermis with the bistoury, having first softened it by the application of an emollient poultice. By cutting away layer after layer, until he arrived at the quick, he obtained a surface, on which the blister of cantharides produced its ordinary effects. In chronic affections it was necessary to keep up the suppuration of the blistered surface for some time.

The author mentions twelve cases of rapid cure obtained by this simple process. A circumstance that vouches for his veracity is, that he abstained from practising these experiments on persons affected with chronic or with very recent sciatica; in the former cases, because all treatment might fail, on account of their obstinacy; in the latter, on the contrary, because ordinary medication effects in general an easy and prompt cure.—*Annali Universali di Med., and Gaz. Méd., Nov.*, 1843.

Prov. Med. J., Dec. 2, 1843, *p.* 179.

55.—*Effect of the Anisodus Luridus on the Pupil.*—The *Anisodus luridus*, a perennial herbaceous plant belonging to the natural family of the *Solaneæ*, was brought from Nepaul to Europe in 1824. In our gardens it often does not come out till the middle of June; it then springs up with astonishing rapidity, and soon surpasses the *Atropa Belladonna* in height. It strikes its roots deep into the ground, and withstands the severest winters. It is of a pale green colour.

A tincture prepared with an ounce of the dried leaves to eight ounces of alcohol at 20 degrees, when given to different patients, produced an extreme dilatation of the pupil; the highest dose being twenty drops in the twenty-four hours. Two of them suffered from amaurosis for a short time, and their blindness did not go off till the medicine was omitted.—*Gazette Médicale*, Nov. 4, 1843; from the *Journal de Médecines de Bruxelles.*

Medical Gazette, Dec. 1, 1843, *p.* 287.

56.—*Devergie's Solution of Arsenic* is composed of arsenious acid, ten grains; carbonate of potash, ten grains; distilled water, six pints and a half; alcohol *(de mélisse composé)*, fifty minims; tincture of cochineal, as much as required to colour the mixture sufficiently. Each drachm of this solution is said to be equivalent to four drops of Fowler's liquor arsenicalis. M. Devergie employs this remedy with advantage in longstanding cutaneous eruptions, particularly those of a squamous and impetiginous nature. He indicates, as a constant result and symptom of cure, the appearance of dark-brown spots on all parts of the skin previously diseased, which persist for some months afterwards.—*L'Experience.*

Lancet, Dec. 30, 1843, *p.* 437.

57.—*Muriate of Ammonia Internally.*—In the medical treatment of pleurisy, and subacute inflammation of the lungs, and congestions of the mucous membrane, I have availed myself very satisfactorily of a German remedy, which is almost universally employed in such cases, viz., the muriate of ammonia.

In English practice it has generally been confined to external use, whereas it is employed by the Germans in a great variety of internal complaints. It usurps the place of the nitrate of potash in British practice. Its employment is confined to sub-acute affections, congestive states of the mucous membrane of the bronchia, and chronic affections of the serous membrane : where the inflammation runs very high, the nitrate of potash and soda are preferred. It has no very decided action on the system, although it sometimes stimulates the kidneys ; but it is considered to be deobstruent, and to unload the vessels gradually, so that convalescence is achieved without any critical evacuation. It relieves thirst, and the tongue gets unloaded under its use. It has certainly a decided action on the mucous membrane generally, and is useful in old coughs accompanied by gastric derangement.

I was loath to employ it when I first commenced practice in St. Petersburgh, but the good recommendation of my German colleagues overcame my scruples, and during the last ten years of my sojourn among them, I prescribed it most freely, and have reason to speak most highly of it. I never failed to use it in the many cases which that climate affords of such affections as are benefited by it.

Its combination with the tartrate of antimony, in a solution of extract of liquorice, is a valuable prescription. The following is the form usually employed :

℞ ammoniæ mur. ℥j. ; ext. glycyrrhiz ℥iij. ; antim. tartar. gr. ij. ; aquæ distil. ℥ viij. M.

A large table-spoonful of this mixture is administered every two hours. The antimony forms no inconsiderable part in the operation. When its nauseating effects have made sufficient impression upon the disease, it may be withdrawn, and the muriate continued by itself. In many cases the latter is only administered.

Stomach coughs are greatly benefited by it. Where the tongue is loaded, it cleans rapidly under its use. A variety of affections of the mucous membrane, sore throats, enlarged tonsils, relaxation of the uvula, &c. feel its influence.—*Sir G. Lefevre on thermal Comfort.*

Dublin Journal of Medical Science, May, 1844, *p.* 370.

58.—*The Sea Side as a Remedial Agent.*—By M. Guastalla, of Trieste. The influence of a marine atmosphere in the treatment of various diseases has been recognised by physicians from the earliest times. But though daily experiencing its advantages, they were ignorant of the true principles on which its salutary effects depended. And even since the discovery of the real constitution of the atmosphere, various opinions have prevailed on this point. At first it was thought that the maritime air contained a larger proportion of oxy-

gen than other air, that gas being disengaged in the course of the incessant decomposition of sea-water. Very soon, however, sea-salt was supposed to have been recognised as entering into the composition of sea-air, and works were written recommending voyages as a means of absorbing this substance by the lungs in various diseases thought likely to benefit by it. Strange to say, the early hypothesis of the greater oxygenation of sea-air has been revived in the present day, and a M. Assegond has maintained that in phthisis complicated with inflammation, the respiration of sea-air is injurious, owing to its being too stimulant from its higher degree of oxygenation. All the great authorities in chemistry, however, are decidedly opposed to the idea of any difference in the essential elements of the air of different districts; and if the air of the country is more salubrious than that of towns, or that of marshes injurious, or that of the sea possessed of peculiar qualities, it appears to be owing to the circumstance of these varieties of air holding in suspension various foreign admixtures, for it is established that the relative proportions of the essential constituents of the atmosphere are everywhere the same. What then are the accidental admixtures to which marine air owes its peculiar qualities? They are precisely those which are to be looked for from the nature of the case,—chloride of sodium, and free muriatic acid. But this statement must be received with some degree of qualification. It has been proved by Berzelius that the air of the sea-side contains no acid or salt in combination with itself, and that the vapours rising into it are purely aqueous. But during the agitation of the sea, and particularly in high winds, and where the waves break violently upon the beach, a quantity of natural sea water is driven into the air, and may be conveyed to a greater or less distance according to circumstances. Thus then, by whatever means they may have come there, sea-air does contain, in a state of suspension, certain proportions of sea salt, and of muriatic acid, which are inspired into the lungs, and there absorbed and conveyed into the blood. Now, the experiments of Albers and others on the respiration and absorption of these substances used medicinally, prove that, though at first chlorinated respirations irritate the nose, the eyes, and the bronchial mucous membrane, yet, when absorbed, they very speedily exert a powerful antiphlogistic influence in chronic inflammations of the chest. In addition, sea-air contains very little carbonic acid, and so is purer than the air of towns. The free ventilation on the sea-side also prevents mephitic particles from accumulating as they often do in inland situations. The aqueous vapour constantly rising into the air from the sea, is another favourable circumstance rendering it fit for respiration in a number of diseases which we know are aggravated by breathing a drier atmosphere. From the same cause, the temperature of the sea-side is milder and less liable to sudden changes. These various circumstances explain the undoubted healthiness of sea-ports and islands. Practitioners in sea-port towns, so situated as to be fully exposed to the constant influence of sea-air, have been struck with the less degree of intensity which inflammatory

affections present there, compared with what they do in inland situations. It is impossible, therefore, to attach any weight to the statement of some authors, that sea-air is exciting, and injurious to phthisical patients. There is a period of the disease, that of suppuration, when no means will prolong life, but it is contrary to fact to suppose that the air of the sea will hasten death. So convinced was Laennec of the importance of this remedy in chronic diseases of the chest, that he was induced to establish a kind of marine atmosphere in the wards of the Hôspital de la Charité, by means of fresh marine plants placed around the beds, and by making the patients take infusions of such plants. In such a case, however, the resources of art must of necessity be much inferior to those of nature, and the phthisical patients sent to hospitals are generally in far too advanced a stage of the malady to benefit much by these feeble imitations. From these and many other analogous observations which might be quoted, it results, that in chronic inflammations of the chest, sea-air is of unquestionable benefit, in so far at least, that if it does not cure them all, it so far alleviates them, that they cease to be insupportable or incompatible with life. Farther, that instead of sending phthisical patients to the country to breathe the dry air of the mountainous regions, they should be sent on sea-voyages or else to some well chosen, healthy, and favourably situated part of the sea-shore.—As quoted in *Annales de Thérapeutique*, Nov. 1843 ; *from an Italian Journal.*

London and Edinburgh Monthly Journal of Med. Sci., May, 1844, *p.* 416.

59.—*On the Valerianate of Zinc.*—This new remedy is much employed in Italy in nervous diseases, and appears to be a remedy of sure efficacy in that class of cases, and a valuable addition to our means of treating them. Its formation is not difficult, if only we have previously obtained its two elements in a state of purity. Let a quantity of hydrated protoxide of zinc, sufficient to saturate the acid, be gradually added to a quantity of valerianic acid. Heat favours the combination. Then pour the solution of the salt into a porcelain vessel, adding a small quantity of protoxide of zinc to neutralize any uncombined acid. Concentrate the solution by evaporation, and a white crust of valerianate of zinc will form on the surface, which is to be removed as it forms, and after being dried, put into a close phial. M. Muratori has obtained the salt in another way, by the double decomposition of sulphate of zinc and valerianate of lime ; we thus obtain a solution of valerianate of zinc, sulphate of lime being thrown down. The fluid is then concentrated. M. Cerulli treats of the practical applications of the medicine. In three cases of supra-orbital and infra-orbital neuralgia, a cure has been obtained by giving it in doses of one and a half grains daily, divided into two pills, and taken at the moment of the accession of the paroxysm. In one case, the cure was complete in thirty days ; in forty, in another ; and in fifty, in the third.—*Gazette Médicale de Paris*, Jan. 1844.

London and Edin. M. J. of M. S., May, 1844, *p.* 427.

60.—*Veratria Ointment and Acetate of Veratria.*—Veratria made into an ointment with lard (3-10 parts of veratria to 400 parts lard) has been used for many years by Calvé and other physicians at Montpellier, with the best effects, in all forms of neuralgia. Sauvan, the apothecary, remarked that an ointment of veratria, prepared with rancid fat, was more potent, and attributed this to the soluble *(acetate) salt* of veratria, which was formed by the liberated acid. The veratria is dissolved by the acetic acid; at the same time, a small quantity of an oily substance, which is coloured reddish-brown by nitric acid, is separated; and on evaporation a gummy, readily soluble salt, of a slightly bitter taste, is obtained, but more powerful than the pure veratria which has been treated with æther. It will consequently be better to make the ointment of *acetate of veratria and fresh lard* in small quantity, than to trust to the uncertain effect of the rancid fat.—*Pharm. Central. Blatt.*, Jan. 31, 1844; and *Chemist.*

London and Ed. M. J. of M. S. May, 1844, *p.* 427.

61.—*Effect of Electro-Magnetism on Paralysis.*—By Dr. Shearman, Rotherham. In a very excellent summary of the proceedings of the Sheffield Medical Society, by Mr. Law, we find the following notice of a case of Dr. Shearman's.

The patient, a lady, was 51 years of age, and had suffered for some months from tic doloureux of the right inferior maxillary nerve. On January 31, 1841, she was suddenly seized with an extraordinary attack of vomiting. She fainted, and had loss of power over the arms when in the upright, but not when in the recumbent posture. On the evening of the 1st of February, she found it impossible to swallow any thing, and the sickness subsided. There were no symptoms of inflammatory action. Subsequently she had paralysis of the left side of the face, and of the right arm and leg. The patient became exceedingly feeble, and neither external nor internal stimulants had any effect. Dr. Shearman treated the case as he would have done if it had been one of palsy, succeeding a slight fit of apoplexy. Nothing could be introduced into the stomach except through the œsophagus tube. On the 25th of February, electro-magnetism was applied, with the sanction of Sir A. J. Knight, to the back of the neck and chest in the course of the œsophagus, to the left side of the face, and from the spine in the course of the nerves to the right arm and leg. This was done one hour at least three times a day for a month, and afterwards twice a day. The nutritious and stimulating injections into the stomach were continued until March 9th, when she could swallow so well that the œsophagus tube was unnecessary. Pretty good doses of quinine, and other stimulating tonics, in the way of nourishment, were administered; and great attention was paid to the digestive organs. On the 26th of June she could walk up and down stairs tolerably well. From this time, the electro-magnetism was gradually discontinued. She got quite well, and is so at this moment.

This is clearly a very rare case. While it was going on, Sir A. J.

R.S. LIBRARY.

Knight and Dr. Shearman consulted all the authorities within their reach without obtaining any information respecting it. Dr. Shearman referred the case to Dr. Abercrombie, who acknowledged that he was quite at a loss with regard to the state of the spinal cord. There can be no doubt that in this case there was no structural disease. This seemed to be the general opinion of the society. With respect to treatment, the writer doubts whether the electro-magnetism is entitled to the credit of having effected the cure; or whether this should be attributed to the quinine, stimulating tonics, and the great attention which was paid to the digestive organs. Paralysis occasionally terminates favourably quite irrespectively of medical treatment, and the acknowledged obscurity in which the proximate cause, in the case under consideration, was involved, demands especial caution in assigning to each of the various means employed in the treatment, its due share of credit. It is by no means impossible, that the electro-magnetism, instead of having carried off the complaint, retarded the cure; and that this was ultimately accomplished by nature, assisted by the general treatment. Until a series of cases treated with, have been contrasted with a parallel series treated without, electro-magnetism, it would be unphilosophical to pronounce a decided opinion on this principle as a curative agent in paralysis. Although the writer has employed electro-magnetism in a variety of cases, during the last twelve months, yet he has hardly been able to verify a single observation of any one of its numerous and zealous advocates. Dr. Shearman used either the negative or positive pole, as chance directed. Now Ritter asserts that the former diminishes, while the latter augments the powers of life, and J. D. Humphreys, medical galvanist, with Chas. Woodward and others, says that the positive pole exerts a salutary influence, by exhilarating the spirits, and infusing feelings of energy and strength; while the negative excites a sense of exhaustion and of irritation. These writers distinctly state that the only effect of the negative pole, if applied to the seat of a disease, would be to aggravate its worst symptoms. How are these opinions to be reconciled with Dr. Shearman's belief, that he had cured his patient by an indiscriminate use of the oxidating and deoxidating electricities?

Dr. Wilkinson, Dr. Hodgkin, Mr. Ware, and Mr. Carpue, ascribe wonderful power to electro-magnetism in diseases affecting respiration, circulation, digestion, and secretion. According to these gentlemen, there is hardly a complaint which it will not either cure or relieve; or an indication in therapeutics which it will not satisfactorily fulfil. The writer can reconcile the discrepancies between the statements of authors and his own experience, only by supposing that the publications on this subject contain many errors. With respect, however, to the case under consideration, it is right to say the society generally agreed with Dr. Shearman, in ascribing the cure to electro-magnetism; and that Dr. Abercrombie speaks rather favourably of this agent.

Prov. Med. Journal, May 15, 1844, *p.* 88.

62.—*On Scarification of the Gums during Dentition.*—By Marshall Hall, M.D., F.R.S., &c. There is no practical fact of the truth and value of which I am more satisfied than that of the effect and efficacy of scarification of the gums in infants, and not in infants only, but in children. But the prevailing, I may say the universal, idea on this subject is, that we should lance the gums only when the teeth are ready to pierce through them, and only at the most prominent parts of the gums, and as the occasion to which I have referred may require; and no idea of this important measure can be more inadequate to its real value. The process of teething is one of augmented arterial action and of vascular action generally; but it is also one of augmented nervous action; for formation, like nutrition, secretion, &c., generally, is always one of nervi-vascular action, and of this the case in question is, from its peculiar rapidity, one of the most energetic. Like other physiological processes, it is apt to become, from that very character of energy, pathological, or of morbid activity. It is obviously, then, attended with extreme suffering to the little patient; the brain is irritable, and the child is restless and cross; the gums are tumid and heated; there is fever, an affection of the general vascular system, and there are, too frequently, convulsions of various degrees and kinds, manifested in the muscles which move the eyeball, the thumb and finger, the toes; the larynx, the parietes of the respiratory cavities; and the limbs and frame in general; affections of the excito-motor part of the nervous system, and of the secretions of the liver, kidneys, and intestines; affections of the ganglionic division of that system.

What is the precise cause and source of these formidable effects? Can the mere tension and irritation of the gum situated over the more prominent part of the teeth be the cause of such extensive morbid actions? I think not. The real source of these phenomena is in the entire dental system, in which actions of unusual energy and extent are going on,—sub-inflammatory they might be called, were they not, in reality, of an essentially different nature and origin. This undue action takes place in the fangs and sockets of the teeth in their whole extent, with their connections, vascular, nervous, and membranous. But *the* focus from which the *nervous* actions emanate is, I believe, not as is generally imagined, the nerves of the mere *gums* seated over the prominent parts of the teeth, but the nerves which may be emphatically termed *the nerves of the teeth themselves*, the nerves which enter into the very fangs and substance of the teeth.

It is to the base of the gums, not to their apex merely, that the scarification should be applied. The most marked case in which I have observed the instant good effect of scarification was one in which *all the teeth had pierced the gums!*

This view of the subject may assist in removing the futile objections of some who have, without due consideration I am convinced, opposed my plan of frequent, often daily, scarification of the gums, to whom I would say, as my sole reply,—Better scarify the gums

unnecessarily one hundred times, than allow the accession of one fit or convulsion from the neglect of this operation, which is equally important in its results, and trifling in its character.

And it is not merely the prominent and tense gum over the edges of the teeth which should be divided; the gums, or rather the blood-vessels, immediately over the very *nerves of the teeth*, should be scarified and divided, as you would divide the vessels of the conjunctiva in inflammation of that membrane.

Now, whilst there is fever or restlessness, or tendency to spasm or convulsion, this *local blood-letting* should be repeated daily, and in urgent cases even twice a day. I would here repeat my maxim,—Better do this one hundred times unnecessarily than have one single fit from the neglect of so trifling an operation. A skilful person does it in a minute, and in a minute often prevents a most serious attack,—an attack which may cripple the mind or limbs, or even take the life of our little patient, if frequently repeated. There is, in fact, no comparison between the means and the end, the one so trifling, the other so momentous.

I would refer those who wish to prosecute this subject to my work on the "Diseases and Derangements of the Nervous System," but especially to my "New Memoir," which contains the most lucid and recent view of the whole subject of the physiology and pathology of the true spinal system, and plates which, for skill in the draughtsman, (Mr. Simpson, of Stamford) both that of the artist and that of the physician, and for interest in a practical point of view, have not been surpassed. *Each* plate evolves a principle of physiology or pathology of great interest and value.

I have frequently thought the vascular condition of the gums during dentition might be ascertained by means of a thermometer properly guarded. The results of a series of observations on this point could not fail to possess much value, whilst they would probably suggest a means of diagnosis in some serious diseases.

I do not pretend, in the above proposition, to have advanced anything new; but in the *locality* chosen for the operation, and in the *promptitude, repetition, perseverance*, and in the *energy and steadiness of purpose* with which I recommend the measure to be adopted,—if these be fully apprehended,—I believe I do propose something *new;* and when I repeat that since I adopted the plan of *effectually* removing *all* irritation in the gums, stomach, and intestines, in cases of crowing and other convulsions of the same nature, early enough, I have not known or seen a fatal case, I am aware that I propose a plan of treatment at once new and *invaluable*. But half measures are of no efficacy.

These remarks do not apply, of course, to convulsive diseases of centric origin.

Lancet, May 18, 1844, *p.* 244.

63. *On the use of Digitalis in certain Diseases of the Heart.*—In the "Northern Journal of Medicine" we find a communication from

Professor Henderson on this subject. Agreeing fully in the power which digitalis possesses of diminishing the frequency of the heart's action, and the salutary influence which it consequently exerts over many of its diseases, the author wishes to show that in all those diseases this influence is not the same ; in some instances the use of this agent being injurious rather than beneficial. Thus, for example, as had been previously pointed out by Dr. Corrigan, in cases of patency of the aortic valves.

The characteristic operation of digitalis is so much less beneficial than in other diseases of the heart, or is actually so injurious, that it becomes a highly important practical rule to abstain from the prolonged or repeated administration of it in the disease in question.

The operation of this influence is thus explained by Dr. Henderson :

Patency of the aortic opening, at that period when the ventricles are being filled, necessarily admits of regurgitation from the aorta, the effects of which are an overloading of the left ventricle, and gradually an enlargement of it. Such being the tendency and issue of the overloaded condition of the organ which results from this regurgitation, it will be granted that whatever increases the amount of the regurgitation must accelerate the progress of the enlargement. That the less frequently the heart beats the greater will be the opportunity for this regurgitation, is sufficiently obvious ; and hence it is that the prolonged employment of digitalis cannot but be injurious when the aortic valves are not competent for their office.

On the other hand, the most favourable results are found to follow the use of this drug in disease affecting the mitral valves. Disease of these valves gives rise to one of two effects, or to both at the same time, viz., obstruction to the flow of blood from the left auricle to its corresponding ventricle, or to regurgitation of the same fluid from the ventricle to the auricle :

When either of these occurrences amounts to a considerable degree, and is of long continuance, hypertrophy of the right ventricle supervenes, and then it is that the sufferings from dyspnœa are developed, and that dropsical effusions take place. The circulation through the heart is materially impeded, and the lungs—partly from this cause, and partly from the augmented power of the right ventricle—placed, as it were, between two fires become overloaded with blood, and distressed with the sense of suffocation. And not only so, but the whole venous circulation becomes retarded, and congestions occur in distant viscera. Superadded to the mere mechanical imperfections which result from the diseases of the opening, and the hypertrophy of the right ventricle, an increased frequency of the actions of the heart very commonly attends, either as a permanent occurrence, or as an occasional event dependent on bronchitic attacks, and, usually in proportion to this frequency, are the distress from dyspnœa and the amount of the dropsy.

The author then explains, on the following principles, the favourable results which follow those cases in a subdued action of the heart:—

This operation is useful in several ways ; it moderates the force with which the blood is propelled into the lungs, and, by the lengthened interval between the contractions of the heart, it allows of the left ventricle being more fully distended, in the case of the narrowed opening, while it lessens the frequency of the interruptions to the passage of the blood, and, in the case of patency of the opening, prevents the regurgitation from being so often repeated.

Dr. Henderson asserts that these views are not mere theoretical speculations, but susceptible of daily proof, and, in support of his opinions, quotes two cases, which are in every respect satisfactory.

Lancet, May 18, 1844, *p.* 257.

64.—*On Benzoin Water.*—The sparing solubility of the salts of lithic acid is well known to be the proximate cause of a large proportion of calculous deposits.

It has been shewn that when benzoic acid, or one of its alkaline salts is introduced into the stomach, the lithic acid of the urine becomes converted into hippuric acid, whose alkaline compounds are of very easy solubility, thus—

Hippurate of Soda is soluble in two parts of water, at 60° Fah., whilst

Lithate of Soda (the staple of gouty concretions, or "chalk stones") is not soluble in less than 4000 parts of water, at the same temperature.

Biborate of soda is possessed of a considerable disintegrating power over urinary calculi.

The solvent properties of the alkaline carbonates is strongly illustrated by the effects of the alkaline waters of Vichy, in dispersing the chalk stones of gout.

It is anticipated that by combining the several medicinal agents alluded to, the efficacy of each will be enhanced, and that, whilst an excess of carbonic acid gas will gratify the palate and invigorate the stomach, copious dilution will hasten the assimilation of the remedies, and contribute towards their final operation. Accordingly a medicine is now prepared as follows :

Purified Benzoate of Potash ...	of each 15 grains,
Biborate of Soda	
Bicarbonate of Potash.....	half a drachm,
Distilled water	16 fluid ounces,

which solution was prepared under a pressure of $2\frac{1}{2}$ atmospheres of carbonic acid gas. The water will be found to retain a large proportion of its gas long after exposure to the air.

This "*Benzoin Water*" will be found to unite the properties of an antacid, of a diuretic, and of a tonic. It will be found useful in an irritable state of the mucous membranes, whether manifesting itself in dyspepsia, or in chronic bronchitis ; in all cases where there is a disposition to the formation of earthy deposits, in whatever part of the human frame—and particularly where such formations are the result of an excessive generation of lithic acid in the system.—(Gout and Lithiasis.) *Med. Chi. Rev. April*, 1844, *p.* 578.

SURGERY.

65.—ON SOME OF THE MOST IMPORTANT SUBJECTS IN THE LATE LECTURES OF SIR B. BRODIE.

Polypus of the Nose. [In the higher classes of society polypus of the nose is not an uncommon affection. It is frequently nothing more than a peculiar excrescence of the Schneiderian membrane which is not malignant. It is a tumour connected generally by a thin neck to this membrane, or by a narrow pedicle, or a long thin membrane continuous with the Schneiderian, but less vascular.

The polypus is very smooth, and but little vascular, though sometimes vessels burrow into it. It is gelatinous in density, and appears to consist of coagulated albumen. In a few instances there is but one polypus; but commonly there are two or three, and frequently clusters, so that we can scarcely count them. The colour, which it is essential to notice, is pearl-like, or white, mixed with brown, of an opal appearance. Soft polypi of this kind, Sir B. Brodie has never seen attached to the septum nasi, the inferior turbinated bone, or any part of the nostril, but almost always to the cells of the ethmoid bone, though occasionally to the superior turbinated bone.

There is at first merely an unnatural secretion of mucus, often without pain—the smell is affected or even disappears, and even the taste may become considerably impaired. The symptoms may go on for years, while the polypus may go on increasing and become more solid, the base being at last almost cartilaginous. It may increase even to come down outside the nostril, or may descend down the pharynx, behind the soft palate, of the size of the fist.]

If large, you can tell how far it extends, if it extend into the pharynx, by putting your finger into the mouth; if it extend to the brain you may tell that by the cerebral symptoms. Then, how are you to get rid of it since it is not under the influence of medicines, being quite local? After it has been removed, I have used local remedies to prevent its return, but medicines are only useful after removal, therefore straightway remove it. In common polypus, ligature is impracticable; and those who propose it can never have had anything to do with the disease. It is impossible also to remove it by the knife, as you cannot see it, and when touched with a sharp

instrument the blood directly flows so as to prevent your continuing the operation. Neither with the scissors can you see your way sufficiently. The best way of operating is with a proper pair of forceps, if you know how to use them. The proper forceps will pull away its neck. The *whole* of the opposite surfaces ought to be quite rough; convex above, concave below, opening laterally, so that it may hold the polypus tight. They should be pretty strong, and not slender, unless for small nostrils. If made with a screw in the handle, having a double worm, when the polypus is grasped, by proper manœuvering and screwing it tight, there is no danger of its slipping off. The proceeding may be longer, but it is more certain. In a few cases you will want such forceps as these, which open from above downwards, but they are not often required. Any forceps should be oiled and warmed, the patient in a chair with his chin elevated; get hold of the polypus near the base, by introducing the forceps upwards to the back of the nostril; place one blade on each side, tighten the forceps with the screw, and then—not merely pull it out at once, or the polypus will break off—but twist a little to each side, gently draw forwards, push backwards, twist it again and again, a few times, and then draw out the forceps with some force, and the polypus will come away entire. There may be several others, and if so, repeat the operation. The patient should blow his nose, so as to bring them all into view; if he cannot do so, you must endeavour to remove them without seeing them. There may be, also, a small one jammed in by the larger, which is to be seen on removing the latter. Having done all this, the relief to the patient is immediate.

In some cases one operation is sufficient; in others, two, or even three, are, necessary. Be gentle in using the forceps; rough usage might impair the ethmoid bone, or even the cribriform plate. I never saw any inflammation result from the operation, or cerebral symptoms, or erysipelas. In one case hæmorrhage followed, which I easily stopped by plugging the nostril with lint. Mucous membranes bear injury more readily than the skin, as in the case of internal piles.

In very old, firm, and cartilaginous polypi, there is great adhesion to the bone; but it is of no consequence if you remove a small plate of the bone with it, for at least that shows that the whole polypus has come away. In these cases I use a peculiar forceps, resembling those employed by ladies for cutting flowers, so constructed as to cut at the upper part, having a rough surface below, to hold the polypus. These shave off the polypus as near the bone as possible.

I will conclude my remarks on the extermination of common polypi from the nose, by adding, that in some cases you may know from what occurs at the operation, that there is a tolerable chance of the tumour not returning. In making this observation I allude to an occurrence that I lately met with. A gentleman came to me with a polypus. There was only one that I could discover. In removing it, a portion of the cells of the ethmoid bone was taken away. There is no harm whatever in a

part of the ethmoid bone being thus extracted; I never saw any ill consequences arise from it, and you may suppose, from the polypus being thus completely removed, that there is less chance of its return than there otherwise would be. Another polypus may arise from other parts of the mucous membrane, but certainly not from this.

[When the polypus has been removed it is well to endeavour to prevent its return. Sir B. Brodie recommends for this purpose the *white precipitate ointment.*]

This should be softened by holding it before the fire, and then, with a camel's-hair brush, you must paint the upper part of the nostril from whence the polypus seems to have originated. This must be done every day. It is a very mild application, and does not irritate. A gentleman very steadily persevered with this plan; he often came to me for other little complaints, thus I had an opportunity of watching the case, and the polypus did not return for fifteen or sixteen years, when I again removed it. I have seen other cases in which very great good appeared to arise from this local application, after the removal of polypi. Sometimes I have employed the ung. hydrarg. nitratis diluted, but I have more frequently used the white precipitate, and I prefer the latter. On the whole I think it is quite as effectual and does not inflame the nostril, or cause sneezing, or plague the patient so much as the former. Its use, however, must be persevered in steadily,—not for a few days, a few weeks, or a few months, but even for years. The patient must learn to apply it carefully for himself, or get some one to apply it well for him. If the brush be merely introduced a little way into the nostrils it can do no good. You must explain to him the direction which the passage of the nostril takes, and show him how to pass it up into the middle meatus, directing the instrument first a little upwards and backwards, and then directed backwards into the throat; and, indeed, the brush ought to be carried back as far as the pharynx, so that you may sweep, as it were, the whole roof of the nostril. You may use astringent lotions, which I have no doubt are sometimes attended with advantage, such as a solution of sulphate of zinc, or a solution of alum. Dissolve half a drachm of sulphate of zinc in eight ounces of rose-water, with a drachm of tincture of galls, and let the patient inject this with a syringe into the nostrils every day. This may more especially be employed where the nostril is narrow, and a camel's-hair brush of sufficient size cannot be made to enter it.

I have sometimes applied the nitrate of silver to the roof of the nostril from which the polypus grows. This must be used carefully, not because of any real harm that it will do, but if it be applied too extensively it will produce inflammation of the nostril. The upper lip, from the margin of the nostril, must be protected by smearing the parts with olive oil, otherwise the nitrate of silver will flow down upon them, and then, some time afterwards, when the patient has

been exposed to the light, he will find a great black stain on his face.

A polypus occurs in the nostril of a different structure from that which I have just described—a fleshy polypus apparently composed of firm, solid fibrin, with a very thin membrane over it. It is apparently of the same structure as the polypus that grows from the uterus, and sometimes from the rectum. I am inclined to believe that sometimes the common polypus alters its structure, and becomes a fleshy polypus; but certainly that is not generally the case. I think, however, it does occur in some instances; I know that in other cases a polypus is fleshy from the beginning.

These fleshy polypi have generally a narrow neck, as in the case with polypus of the uterus, and that which grows from the inner surface of the rectum. The polypus does not appear to me to be restricted to any part of the nostril, to the cells of the ethmoid bone, or the superior turbinated bone. I saw one of these polypi on the septum nasi, quite within sight. It was an inch in length and three inches in diameter, and attached to the surface of the septum nasi by a narrow neck. I introduced, not a pair of forceps, but probe-pointed scissors, slightly curved, and snipped off the polypus close to the septum. I applied nitrate of silver to its foot; and when I saw the patient a considerable time afterwards, there was no reproduction of the polypus. In like manner the fleshy polypus of the uterus does not grow again after it has been removed by ligature.

[In other cases it is not possible or prudent to remove the polypus by this means: it is necessary to do so by ligature, and as Sir B. Brodie says, it is much easier to talk about this operation than to do it.]

One method of tying a fleshy polypus that projects from the nostrils into the pharynx is this:—Pass a bougie into that nostril from which, judging by the exploration of the finger, you suppose the polypus to arise. It may have its origin from the septum between the two nostrils, and in that case you may pass it into either nostril, but generally by introducing the finger into the pharynx and turning it upwards, you will discover that the tumour arises from one or the other nostril. The bougie is to be passed through that nostril into the pharynx; the finger must then be introduced into the pharynx, the bougie bent, and one end brought out at the mouth. Thus, one end of the bougie projects from the nose, and the other from the mouth. You fasten a double ligature to the end of the bougie that projects from the mouth, and the loop hangs down. You draw the bougie out at the nose; the ligature, of course, follows it; you cut it off from the bougie, and then the two cut ends hang out of the anterior nostril over the upper lip, the loop at the opposite end hanging out of the mouth. The ligature should be strong and well waxed, so as to make it stiff. It should also be very long, or you will find the operation difficult; it is easy to cut it shorter. The next step of the operation is to get the ligature over the tumour. For this pur-

pose you cut through the loop hanging from the mouth, so that there are now two single ligatures. One end of the single ligature is to be passed through a silver tube, and putting the tube into the mouth and pharynx, you carry one end of the ligature under the base of the tumour on one side of it. You leave that out of the mouth, and your assistant holds both ends of the ligature to prevent it from slipping; then, with the same silver tube, you are to take hold of the other loose ligature at the mouth, and carry that on the other side of the polypus, and there your assistant is to hold it. A knot that will not slip must then be made of the two ends of the ligatures that hang from the mouth. You have a ligature now on each side of the polypus, and then, by carefully drawing the ligatures out at the end of the nose, you have got hold of the polypus at its base. A silver tube is then to be introduced into the nostril, and you tighten the ligature upon the shoulders of the tube in the same manner that you are taught in the lectures on midwifery to tighten a ligature on polypus of the uterus. It must be tightened every day till you have completely cut through the polypus. But if this were all, when the polypus was loose it would drop into the pharynx; that would be of no consequence if it were a small one, but if it were large it might choke the patient. To obviate this, after the ligature has been applied, pass a needle, with a strong ligature, through the polypus, and let the ligature hang out of the mouth, so that when the polypus is loose, the patient may draw it out at the mouth. It was in this manner that I tied the very large polypus that I mentioned a few minutes since.

But there is another method that is still more convenient than this, and which I have employed on other occasions. It was the method adopted by Dessault. You require a silver tube by which the ligature is to be directed into the mouth, a shorter silver tube to be introduced into the nostril for tightening the ligature, and two pretty long ligatures. You introduce a bougie into the nostril and bring out one end at the mouth. To this you fasten a single and a double ligature; the single one must be very long. That being done, the bougie is to be drawn out at the nose, and, of course, the ligatures follow it. You then cut off the bougie, and you have the two ends of the double ligature hanging out of the nose, and the loop hanging out of the mouth; one end of the single ligature also hangs out of the nose, and one end out of the mouth. The single and the double ligature always pass on one side of the polypus; but by means of a silver canula you draw the single ligature to the other side of the polypus. The ligature being held in its place by an assistant, the end of the single ligature, projecting from the mouth, is passed through the loop of the double ligature, and the ends of the double ligature being drawn out of the nose, the single end follows, and you make a ligature which you fasten by means of a canula introduced into the nose. This method is easier in practice than the one I mentioned before, though it is more difficult to describe.

[Other tumours of a malignant nature may grow from the nostrils,

which may be confounded with the two kinds of polypus just referred to. No good has hitherto resulted from interfering with them, and therefore Sir B. Brodie thinks it better to let them alone, as "they have generally so broad a base that any operation for their removal is out of the question."]

Lancet, Dec. 9, 1843, p. 313.

[There are some non-malignant affections which are sometimes mistaken for polypi, for example, a scrofulous child may have difficulty of breathing through the nostrils, and on examination the membrane is found turgid and vascular, with an excrescence upon it. This, however, will frequently be nothing more than a thickening of the mucous membrane of the nostril at the anterior extremity of the inferior turbinated bone. The mucous membrane may not be more thickened than elsewhere, but it is more apparent in that situation on account of the projection of the bone.]

In some cases in which the mucous membrane has been sufficiently thickened to obstruct the respiration through the nostril, I have introduced a pair of probe-pointed scissors, slightly curved, and snipped off a portion of the projecting mucous membrane. There is no harm whatever in its excision; and where the nostril is much obstructed, the operation affords great relief. You may suppose this to be a very simple operation; and so it is, for it is done in an instant, but yet it requires some care in order that it may be done properly. In the dead body you might snip off a bit, and if you had not completed it by one incision you could make another. But in the living subject the mucous membrane is full of vessels, and the part must be snipped off at once; for the moment one division is made with the scissors, the hæmorrhage is so great that you cannot see a bit of the remaining part which requires to be divided. It is only every now and then that you find it necessary to have recourse to this operation. In other cases give the child small doses of steel for three weeks, then suspend its exhibition for a fortnight, and again resume it,—and proceed in this manner for three or four years. Delicate children who are liable to this disease of the Schneiderian membrane are always benefited by the exhibition of steel; it should, however, be given not in large doses, for a short time, but in small ones long continued. Where the constitution is weak, you may sometimes cure the disease in three weeks, but the rectifying of the constitution is a work of years. Some good may be done by local treatment. Dissolve two grains of sulphate of zinc in an ounce of rose-water, and inject a portion into the nostrils two or three times a day; or paint the inside of the nostril with diluted ung. hydrarg. nitratis by means of a camel-hair brush.

I have seen some cases in which a small abscess has formed in the tumour that I have just described. Suppuration has taken place in the substance of the Schneiderian membrane, just where it projects in front of the inferior turbinated bone, and the best plan to adopt

is to cut off, with a pair of scissors, membrane and abscess altogether. When an abscess forms in a pile, that is best relieved, not by laying open the abscess, but by snipping off the pile.

Diseases of the Tongue.—[On diseases of this organ we find very little attention has been paid by authors, except on those which are malignant. Indeed it is too often the case that writers bend their chief attention to those affections which are most uncommon in private practice, while they neglect to give us their experience on the more common events of daily practice. In this respect most practitioners have to be their own instructors, and do not become really well informed on the common routine of practice till some years have enabled them to make minute observations at the bedside. The tongue is sometimes *swollen* in dyspeptic persons, or it becomes *cracked* on the surface. These cracks or fissures are sometimes very deep, and will generally be durable. They often arise from profuse salivation at some former period of life: but when slight, may be owing to dyspepsia. If owing to mercury, the best remedy, perhaps, is sarsaparilla, or nitric acid. We sometimes find little *ulcers* on the tongue, often the consequence of syphilis, and accompanied, perhaps, with little spots of syphilitic psoriasis on the body or on the scalp. They soon disappear by means of small doses of mercury; and in one case mentioned by Sir B. Brodie the hyd. c. creta was given in small doses for nearly two months before a radical cure could be effected. Small doses are much to be preferred to large ones. Sir Benjamin prefers five grains of the hyd. c. creta with one or two grains of Dover's powder; and where this fails he gives the iodide of potassium, two or three grains given twice daily, dissolved in plenty of water. If these ulcers arise from dyspepsia, which is frequently the case, one or two applications of the nitrate of silver will be sufficient to cure them.]

There is a disease of the tongue which I have seen every now and then, and which I am sure is very often mistaken for cancer, though it is of a different nature. It is a curable disease, although it looks like a malignant one in many respects. The first thing of which the patient complains is enlargement of the tongue, with some pain. On examination you find a tumour in one part of it, not very well defined, not with any distinct margin. It is a softish tumour, and increases in size; and perhaps another tumour appears in a different part of the tongue, and that increases also. There may be three or four of these soft elastic tumours, with no very defined margins, in various parts of the tongue. This is the first stage of the disease.

In the second stage there is a small formation of matter in one of these tumours,—a little abscess, which breaks externally, discharging two or three drops of pus. When the abscess has burst it does not heal, but another forms in one of the other tumours. These abscesses may assume the form of ulcers, and the ulcer has a particular appearance. In the first instance it is a very narrow streak of ulceration, but on introducing a probe you find that the ulcer is the

external orifice to a sort of fissure in the tongue. The probe passes in obliquely ; the tongue is, as it were, undermined by the ulcer, a flap of the substance of the tongue being over it.

The disease now becomes more painful, and at last these ulcers may spread externally. In some instances they occupy a very considerable portion of the surface of the tongue, but generally they burrow internally, and do not spread much towards the surface. This is a very distressing state of things, and a man may remain in this state for a long time. The glands of the neck do not become affected, nor does the general health suffer, except from the difficulty of swallowing food. This is one inconvenience experienced by the patient, and he also labours under a difficulty of articulation. The tongue, from its enlarged state, may become stiff, not sufficiently pliable for the purposes of speech, and the patient either speaks thick or lisps.

In some instances the disease may be relieved by a course of sarsaparilla, with small doses of bichloride of mercury. A strong decoction of sarsaparilla, with from a quarter to half a grain of bichloride of mercury, may be taken in the course of the day. Of course, if there be anything wrong in the general health, you should endeavour to get that corrected, and attend especially to the state of the bowels and the secretion of the liver. If the secretions of the digestive organs be unhealthy, a dose of senna and salts may be given every other morning, and blue pill every other night. When the patient is brought into this state, one remedy, as I have said, is sarsaparilla with bichloride of mercury, but, according to my experience, this is not the best remedy. The remedy best adapted for these cases is a solution of arsenic. Give the patient five minims three times daily, in a draught, gradually increasing the dose to ten minims. It should be taken in full doses, so that it may begin to produce some of its poisonous effects on the system. When it begins to act as a poison it will show itself in various ways. Sometimes there is a sense of heat, a burning pain in the rectum ; sometimes griping, purging, and sickness, and nervous tremblings. A patient who is taking arsenic, especially in pretty large doses, ought to be very carefully watched. At first you may see him every two or three days, and then every day ; and as soon as the arsenic begins to operate as a poison, leave it off. When this effect is produced the disease of the tongue generally gets well, but at any rate leave off the arsenic, and the poisoning will not go too far ; it will do no harm. If, after a time, you find that the disease is relieved, but not entirely cured, you may try another course of arsenic. Perhaps it may take a considerable time to get the tongue quite well. Sarsaparilla, with the bichloride of mercury, may be given at one time ; and at another, arsenic. You cannot give either of these remedies for ever, and indeed the arsenic can only be given for a very limited period ; but it is astonishing what bad tongues of this description I have seen get well under these modes of treatment, especially under the use of arsenic.

[Sir Benjamin thinks that many of these affections, which at first are not malignant, may ultimately prove so; and when they assume the malignant character, or when a disease is of a malignant nature from the first, he thinks it is the best plan to let it have its own course. As in a cancer of the breast it would be of no use to remove the small portion where malignancy first shows itself, or part of a tibia affected with fungus hæmatodes, so in cancer of the tongue the whole organ is more or less diseased from the first, and to remove the piece which first shows symptoms of malignancy, would be of little avail.]

There is one other disease of the tongue, or rather a disease under it, which remains to be mentioned. A patient comes with a sore mouth, and you see the tongue pushed up to the soft palate. It looks as if the tongue were enlarged, but that is not the case, it is lifted up. You tell the patient to put his tongue against the incisor teeth, and on looking beneath you see a tumour. By feeling it you find fluctuation, you puncture it, and let out a quantity of transparent fluid, sometimes a teaspoonful or more. The fluid is a little glutinous, and consists of saliva. There has been an obstruction to the orifice of the submaxillary gland; the saliva has been secreted by the gland, but could not get out by the duct, and hence it has remained till it has formed a large tumour. This is what is called ranula.

You puncture the tumour with a lancet; the fluid comes out, and immediately the patient is well. You see him a week afterwards; he is quite well, and there is the saliva flowing out of the orifice you have made with the lancet. But you see him a month afterwards, and the tumour has re-appeared, the orifice has healed, and the tumour becomes as large as ever. All you want is, to get a permanent orifice from the bag into which the duct has been converted; but that is a very difficult matter. I have tried to effect it in various ways. I have punctured the bag, and then touched the edge with caustic potassa to prevent its healing. The patient has gone on very well so long as it did not heal, but as soon as I have left off applying the caustic the orifice has closed. I have introduced a tenaculum into the bag of the ranula, and cut away a piece sufficiently large to admit the finger; the patient has then continued well for a longer time, because the part takes longer to heal, but contraction takes place, and the patient is bad again. I have run a seton through, and the patient has then gone on well for a considerable time. I have introduced a gold or silver ring, and kept that in as a seton. If the seton be kept in a considerable time it seems to effect a permanent cure, but even that fails, and you have to perform the operation two or three times. I know of nothing better than the use of a seton, and I believe that it is better made of metallic substance than of silk. It does not so soon ulcerate its way out, and if it remain in for a long time the edges of the orifice through which the seton is introduced may become covered with mucous membrane. If you introduce a

silk or India-rubber seton in the back of the neck, after a great length of time a sort of skin forms on the inner surface of the canal; there is a discharge of matter; and when you take away the seton the part in which it lay remains pervious. So if you keep a seton in a ranula for a very long time the opening may remain pervious. The advantage of a metallic over a silk seton is, that it does not ulcerate its way out so soon, does not get putrid in the mouth, and therefore may be kept in for a longer time.

Lancet, Dec. 16, 1843, *p.* 345.

[Sometimes the tongue is affected with a tumour, which, if it occurred in the female breast, would perhaps be mistaken for scirrhus; but still it has not the character of scirrhus of the tongue—it is hard and circumscribed, and rather deeper than common scirrhus. Sir Benj. Brodie would ascertain the effects of iodine upon such a tumour, before he pronounced a decided opinion. In one case he gave eight or ten drops of the tincture of iodine three times a day, and gradually increased the dose to 20 drops. The tumour ultimately disappeared. In relating this case he cautions us against the too long continuance of iodine, without keeping our eyes on the patient. After continuing its use too long he was seized with paralysis, but on leaving off the medicine he recovered—thus showing how powerfully iodine may affect the nervous system, if used for too long a time.

Paralysis.—Sir Benj. Brodie gives some most interesting cases of the different forms of paralysis, with the morbid appearances in the brain or spinal column, which he detected; but after most careful examination of these cases during life, he acknowledges that their treatment is often exceedingly difficult, as we have not yet sufficiently advanced in our knowledge of this complaint to be able to state positively whether the disease be of one kind or another. If the disease be an inflammatory affection of the membranes, we may distinguish it tolerably well; but if it be of a chronic character, it is difficult to discriminate between softening of the spinal marrow, tubercles in the spinal cord, and effusion of fluid in the theca vertebralis: besides, these three affections may be combined together, or there may be one first and the others may supervene.]

However, let us suppose that there is a case of inflammation of the membranes of the spinal marrow. The patient comes to you with a severe attack of dreadful lumbago, and by and by he states that there is numbness in the legs, and then difficulty in moving them. In this case you may be pretty sure that there is inflammation of the membranes of the lower part of the cervical cord. How is that to be treated? In the first place take blood by cupping from the loins, and repeat it according to circumstances. Begin by purging the patient, clearing the bowels well out—a right plan to pursue in all cases of inflammatory disease. Then put the patient under the influence of mercury, exhibit calomel and opium, and

treat him as you would a patient labouring under pleuritis or iritis. If I am not much mistaken I have several times seen the disease stopped by the exhibition of mercury. I have known a patient labouring under numbness of the limbs and incipient paralysis recover when the gums were made sore by mercury. But if you are called in at a late period, when the inflammation has subsided, and the paralysis consequent on it remains, even then you cannot do better than put the patient under a course of mercury, though not such a course as you would employ in the beginning of the disease. You must not now exhibit two or three grains two or three times a-day, but a mere alterative course—five grains of Plummer's pill, night and morning—the eighth of a grain of bichloride of mercury twice a-day, in addition to which you may apply blisters to the lower part of the back.

The result will vary in different cases according to the time at which the treatment is commenced, or according to the intensity of the disease. In some cases you may obtain a perfect cure under the use of mercury; in others, an imperfect one. A gentleman riding in a second-class railroad-carriage was exposed to a draft of cold north-easterly wind from one to two hours. The next day there was pain in the neck, and two or three days afterwards his hands were benumbed. In the course of a week both his arms became paralytic, and then the lower limbs also. We put him under a course of mercury, and he partially recovered, so that he was able to walk about and write, but he was still paralytic to a certain extent.

The treatment of a chronic affection of the spinal cord producing paralysis, must be, to a great extent, empirical, because you cannot make a certain diagnosis. Let me repeat what I have just now observed, that I have never seen any beneficial results arise from the use of counter-irritation; on the contrary, I have often seen it productive of mischief. Probably the bowels are very torpid,—they will require to be kept open, and it is very difficult to effect it. Sometimes very strong aperients are necessary for this purpose; but it is essential that they should be kept open, for the secretions of the digestive organs are very often exceedingly disordered. The stools will be black, like tar, and the lodgment of the black secretion in the intestinal canal appears to be productive of great mischief to the system. Calomel and a black draught may be exhibited every now and then, but a patient cannot take them from day to day. Sometimes the comp. ext. colocynth will be sufficient, but simple purgatives often fail. The pills which I am about to mention I have found to be convenient in cases of this kind. Two scruples and a half of comp. ext. colocynth; half a scruple of soap; one drop of croton oil. Let these be well rubbed up and carefully mixed, and divided into a dozen pills, one or two of which may be taken every night or every other night when wanted. These are excellent pills; they cause nothing like the inconvenience produced by large doses of croton oil, and are very efficient indeed. The disease is very probably quite incurable, and it does not matter what medicine you give

the patient. But still every now and then the progress of the disease is stopped, and the patient gets very well again.

The treatment which I have found to be most successful, and under which I have seen the greatest benefit arise is, a grain of zinc made into a pill and given three times a day, and then a draught of twenty minims of tincture of cantharides to wash it down. If you dissolve the sulphate of zinc in the draught it makes it nauseous,—you may as well give ink. After a time the sulphate of zinc may be increased, and if you please you may carry it up to five or six grains; but I do not advise you to do it, for if you increase it to a certain point it makes the patient sick, and you cannot induce him to take it afterwards. It is from the continued use of the zinc, and not from the exhibition of large quantities that benefit is to be derived. The zinc may be increased to a grain and a half, and the dose of tincture of cantharides may be also increased, but I do not advise you to go beyond what I have stated of the latter; for if you do it is very apt to irritate the urinary organs. The tincture of cantharides is a diuretic, and some have supposed that it does the most good when it acts as such; probably that may be the case, but it seems to be a stimulus to the nervous system also. I mentioned a case in the last lecture in which a gentleman became paralytic in the lower limbs from inflammation of the lower part of the spinal marrow, induced by a local disease arising from the tincture of cantharides swallowed by mistake. It is easy to suppose that large doses of this agent may excite the vessels of the spinal cord so as to produce inflammation, and that very small doses may be a grateful stimulus to it, tending to restore its power in cases of paralysis. The best recoveries that I have seen have been under this treatment. Some patients have appeared to get very well again; in others the disease appears to have been suspended,—it has made no further progress. I see a gentleman every now and then who laboured under paraplégia, and in whom this treatment was employed. He is now able to walk about, though his limbs are still weak; he has been neither better nor worse for some years. In other cases I have thought that benefit has arisen from the long-continued use of very small doses of bichloride of mercury combined with tincture of cantharides. Small doses do not seem to act as mercury on the system. I apprehend it acts much in the same way as the sulphate of zinc. Exhibit the sixteenth of a grain of bichloride of mercury in a certain quantity of tincture of cantharides, in a draught three times daily, and such plan of treatment will sometimes be useful. But it is right to state that in a great number of cases of chronic paraplegia the disease is incurable. The disease, however, may go on for years before it ascends to the brain and destroys life.

Lancet, *Dec.* 30, 1843, *p.* 426.

Fistula in ano.—[Some of the most interesting and important observations of this truly eminent and practical surgeon are on the subject of *fistula in ano*. Every practical surgeon is aware of the

difficulty of healing an abscess in the vicinity of the rectum. The parietes of such an abscess contract and become hard and callous, in which stage the disease takes the name of *fistula in ano.*]

The first question that presents itself is this,—Why is it that abscesses are so particularly liable to form in the situation in question, and that when so formed they do not heal like abscesses occurring in other parts of the cellular membrane? I formerly supposed that the healing process was prevented chiefly by the irregular action of the sphincter and levator ani muscles. Further consideration, however, and more mature experience, have led me to the conclusion that this opinion was incorrect. That such causes may interfere with the healing of any abscess I well know, but I am now fully satisfied that they will not afford sufficient explanation why it so rarely happens that abscesses near the rectum heal spontaneously, and at any rate, it is quite clear that the action of these muscles will not explain the formation of these abscesses. In order to explain their formation I must call attention to what happens in other parts of the intestinal canal. The mucous membrane, under a variety of circumstances, is liable to ulcerate. In patients who die from diseased liver, or phthisis pulmonalis, or at the end of continued fever, and various other diseases, you find the mucous membrane of the bowels ulcerated. This ulceration seldom extends further, does not involve the muscular tunic, but sometimes the latter is affected, and then some of the contents of the intestines escape. Should this occur where the intestine is covered by the peritoneum the contents may escape into the peritoneal cavity.

Every person who has had much experience of disease has seen cases of this kind ; but there are others in which both the muscular tunic and the peritoneal coat ulcerate, and yet the contents of the intestine do not escape into the cavity. Adhesions take place round the ulcerated spot before the ulceration of the peritoneal coat is completed, and these adhesions cause the contents to escape, not into the peritoneal cavity, but to become infiltrated into the cellular membrane of some part of the abdominal parietes. A young man, of seventeen or eighteen years of age, who had long been in ill-health from disease of the lungs, and who was indisposed in other ways, was supposed to be rather better than usual, but one evening he was seized with violent pain in one side, and there was considerable tenderness of the whole of the abdomen. Two physicians were sent for, the symptoms were not exactly those of peritoneal inflammation, but they could not explain the symptoms so well in any other way as by assuming that he laboured under peritoneal inflammation. The inflammatory symptoms subsided, and two or three months afterwards I was called in to see him on account of a tumour which had formed in the front of the belly. It was an abscess ; I opened it, and there came out pus, and with it a good deal of foreign matter, which I was satisfied must have come from the intestinal canal. The abscess made its way in several other places, and ultimately this young man died. On examining the body after death it was found that there

were ulcerations at the lower part of the ileum ; one of these ulcers had extended through the muscular and peritoneal tunics, but around that ulcer the ileum had contracted adhesions to the abdominal parietes above the groin, and the matter had escaped into the cellular membrane between the layers of the abdominal muscles, and from thence had made its way forward to the part where I opened it. This patient died, but it is not a matter of course that, under such circumstances, such should be the result.

I believe that this is the way in which fistulæ in ano are always formed, namely, the disease is originally an ulcer of the mucous membrane of the bowel, extending through the muscular tunic into the cellular membrane external to the intestine ; and I will state my reasons for entertaining that opinion. The matter is one of great interest as a question of pathology, but it is one of great importance, as I shall show by and by, in connection with surgical practice. It is admitted by every one that in the greater number of cases of fistulæ in ano there is an inner opening to the gut as well as the outer opening ; and I am satisfied that the inner opening always exists, because I scarcely ever fail to find it, now that I look for it in the proper place and seek it carefully. I have, in a dead body, examined the parts where fistulæ had existed several times, and in every instance I have found an inner opening to it. This affords a very reasonable explanation of the formation of these abscesses ; it is almost impossible to understand, on any other ground, why suppuration should take place in the vicinity of the rectum more than in any other part of the body, and why the cellular membrane there should suppurate more than cellular membrane elsewhere. Moreover, the pus contained in an abscess near the rectum scarcely ever presents the appearance of laudable pus,—it is always dirty-coloured and offensive to the smell,—sometimes highly offensive, and occasionally you find feculent matter in it quite distinct. There is no reason why an abscess simply formed in the cellular membrane should smell of sulphuretted hydrogen ; but there is a good reason why it should do so if it be connected with the rectum.

This being the case, it is easy to understand why these abscesses do not heal. The least quantity of mucus even from the gut, or of feculent matter, issuing into the cavity of the abscess, is sufficient to occasion irritation and prevent it healing, and I have more than once, in the living person, been able to trace the progress of the formation of one of these abscesses. For example, I was sent for to see a lady who complained of some irritation about the rectum, and on examining it I found an ulcer at the posterior part. I ordered her to take Ward's paste,—confec. piperis nigr., or cubebs pepper, I forget which. A month afterwards she again sent for me, and I found that there was an abscess. I opened it, and from the outer opening the probe passed into the gut through the ulcer which had been the original cause of the disease. The original opening of the abscess is generally very small indeed, but occasionally it is large, and when the ulceration has proceeded to some

extent, large enough to admit the end of the little finger. The inner orifice is, I believe, always situated immediately above the sphincter muscle, just the part where the fæces are liable to be stopped, and where an ulcer is most likely to extend through both the tunics.

I believe that the most common cause of abscess of this kind is, the lodgment of hard fæces in the bowels; by the straining that takes place to expel them the mucous membrane gets torn or abraded at one part, and then the passage of the fæces causes ulceration. Some time afterwards straining again occurs, and then the muscular tunic gives way, and the fæces escape into the cellular texture. Foreign bodies, however, in the rectum, sometimes cause abscesses. I was called in by a gentleman who complained of great irritation about the rectum. I thought that he laboured under internal piles, but the next day he complained still more, and on examination of the rectum I found a hard substance sticking in the membrane. It was a piece of apple-core which he had swallowed the day before, and if it had not been extracted it would have occasioned ulceration, some of the fæces would have been pressed through the opening, and in all probability the apple-core would have been found in the cavity of the abscess. I was sent for to see another gentleman who was exceedingly ill with a large abscess in front of the anus. He had a brown or rather a black tongue, and bad typhoid symptoms. I opened the abscess freely, let out a quantity of putrid offensive matter, and, on introducing my finger into the abscess, I found a long fish-bone sticking across, with one end in the gut and the other in the abscess. He had swallowed the bone, it had stuck in the bowel, and a little of the fæces escaping by the side made a putrid abscess. Patients with disease of the liver, disease of the lungs, and in certain states of ill-health, are specially liable to abscess and fistula of the rectum. The reason is this: persons thus affected are peculiarly liable to ulcer of the mucous membrane; one of the mucous glandules is attacked, and being very thin it gives way under the straining that takes place to expel the fæces, and fæces escape through the opening.

The first formation of an abscess about the rectum is not in general attended with very urgent symptoms. The patient has a sense of bearing down, a fulness and weight; he thinks that he has got piles; he puts his hand by the side of the anus, and finds a little hardness. After a time it increases, the parts become tender; there is pain when he passes his evacuations; perhaps some difficulty in passing them; by and by the pain becomes still greater, the skin inflames, the abscess, if left to itself, bursts, and a quantity of matter is discharged, which matter is almost invariably offensive, dark-coloured, and putrid. The disease sometimes forms so insidiously that the patient is not cognizant of it till the abscess has burst. Twenty years ago a physician in large practice in London felt very ill, languid, listless, unfit for business; and in the middle of the day, in consequence of headach and an incapability of exertion,

wanted to go home and lie down for an hour before he could finish seeing his patients. One afternoon, intending to walk home, he had sent away his carriage. He found something give way, burst into his small-clothes, and on his return he found that it was a putrid abscess—a fistula. He went through an operation for it, and got well.

While these abscesses are forming there is sometimes little or no constitutional disturbance; but in other instances there is a great deal of it, and I believe that it depends chiefly on the quality of the pus, and that, again, on the size of the opening. If the opening be pretty large, and a considerable quantity of feculent matter escapes, the pus is then of a very putrid quality, and the more putrid its character the more offensive it is to the smell, and the more poisonous it is to the patient's system; for as it is more offensive to the smell so it is more loaded with sulphuretted hydrogen. Such a collection of putrid matter sometimes produces very urgent symptoms.

I have stated that the inner orifice of the abscess is always just above the sphincter muscle, and it may be that the abscess extends no higher than this. But in a great number of cases it does extend higher up—sometimes one inch, sometimes two; nay, I have sometimes found a probe pass four or five inches up the pelvis into a large cavity beside the rectum. These are cases of some interest, respecting which I shall have to speak to you again presently.

The external orifice of the abscess is generally in the skin, a little distance from the anus. Sometimes it seems to pass through the substance of the sphincter muscle, and on other occasions it opens externally to it. The abscess may burrow, and may be two or three inches away from the anus.

In some cases there is no external opening at all, and that may happen in two ways. I saw a gentleman who had an ulcer at the posterior part of the rectum as broad as a fourpenny piece. Some time afterwards I saw him again, and there was then a considerable discharge from the rectum, but no external opening. I introduced my finger into the rectum, and found that this broad ulcer had made a large cavity, in which matter was lodged, by the rectum. The sinus was so large that the matter had found its way out by the gut, and therefore did not burrow so as to make an external opening. But in other cases there is no external, while there are two internal openings, and they are found in the following manner:—There is a small opening through which the pus and fæces were originally infiltrated into the cellular membrane, and then the matter having collected near the gut, bursts into it, and makes a free opening in the neighbourhood of the first lesion. On examining the patient you find a discharge of pus from the inside of the rectum, and on introducing the finger you find distinctly the opening through which the abscess has burst into the rectum. This is what is commonly called blind fistula. The discharge in these cases is seldom quite constant; for the opening made by the bursting of the abscess into the rectum is not so large but what it sometimes contracts, and

there not being a free discharge the matter collects, and you may feel it through the skin near the anus. This is important with regard to the treatment, as I shall explain hereafter. At other times the orifice allows the matter to escape by the rectum, and then the external tumour disappears.

In some cases there is a simple abscess and a simple sinus ; but in other instances the disease is very complicated. The matter does not easily get to the surface, and it burrows in different directions ; there is a sinus in this direction, and a sinus in that ; sometimes it extends even to the middle of the nates, and there may be a sinus on both sides of the rectum. In these cases, where there are several sinuses, and where the disease is rendered complicated from the burrowing of the matter, it sometimes happens that there are two internal openings ; but in general, however complicated the case may be, there is only one internal opening, and that communicates directly with one sinus, and indirectly with another. It is of great consequence to bear this in mind as connected with the surgical treatment. Where there are several sinuses, burrowing in different directions, the patient always experiences some degree of inconvenience. The matter lodges in one place, not in another, but wherever it lodges it occasions pain, there is an attack of shivering, and then the matter escapes. It then lodges in another place, there is another attack of shivering, and in these complicated cases the patient is continually suffering local pain and tenderness, and these are combined with constitutional disturbance.

I now come to consider the treatment of these cases. Why is it that the abscess does not heal? It may, as I supposed formerly, partly arise from the unfavourable locality for healing, in consequence of the muscular fibres of the parts being always in motion. The levator muscle and the sphincter ani are constantly drawing the parts asunder, so that they are not allowed to contract, but that is not a sufficient explanation. There is an internal opening to the abscess, and now and then a little bit of fæces or mucus will become infiltrated, and get into the cavity. That which produced the abscess originally is going on still. If you could get the inner orifice to close, the patient would soon recover. This does sometimes take place. I saw a patient who had an abscess by the side of the rectum, and to whom I recommended an operation, but for some reason or other he wished to put it off. He went about for a considerable time with this abscess, and when I saw him again the abscess was closed, and had been closed so long, and on a careful examination the parts seemed so sound, that I had no doubt that the inner orifice had healed spontaneously ; the escape of feculent matter was thereby prevented, and all the parts granulated and contracted like an abscess elsewhere. The medicine which we now call confec. piperis nigri was originally a quack medicine, known by the name of Ward's paste. It is composed chiefly of black pepper and elecampane, and it had the reputation of curing fistula. I believe that it sometimes did so. It is very useful in the

case of piles, and where there is an ulcer of the rectum unconnected with fistula. The black pepper mixes with the fæces, it passes down the canal, and becomes a stimulant to the mucous membrane. In this point of view it is useful to persons that suffer from disease of the mucous membrane after dysentery, or who have disease of the rectum. As it will cure piles and an ulcer of the rectum, so no doubt it will sometimes cure fistula. If the little ulcerated opening can be made to contract and cicatrise there is no reason why the external abscess should not heal. But you cannot depend on such a mode of treatment as this ; it may or it may not happen to cure the patient, and for one instance in which it effects a cure it fails a great number of times. The disease, however, may generally be cured by a very simple operation, and in speaking of the operation we will take the simplest case first. We will assume that there is a fistula just by the side of the sphincter muscle and only one sinus. The first thing to be done is to find the inner opening. I do not say that you will always succeed in finding it—certainly not the first time, but you will rarely fail if you look for it in the right place. Formerly, I often failed, and for this reason,—I did not know where to look for it. I used to think that it was to be found in the upper part of the sinus, but it is never found there if the sinus runs high up. You must search for it immediately above the sphincter muscle. Another circumstance that makes it difficult to find is this :—The common probe being quite round turns round in the hand ; you want a probe of a much broader kind, so that the least motion of the hand turns the point another way. For this operation I use the probe I now show you, made by Philip and Wicker, in St. James's street. First, it has a flat handle, and that gives you a perfect command of the instrument ; secondly, at the extremity it is like a common probe ; but you must have probes of different sizes. There is a groove, so that it is both a probe and a director at the same time, and being made of silver it is perfectly pliable.

Now, to find the inner opening, place the patient over a table to the light, with an assistant to hold the legs. You introduce the fourth finger of the right hand into the rectum, remembering that the opening is close to the sphincter muscle. You will feel with the finger some little irregularity, and that is where the opening is probably situated. You are then to introduce this probe into the external opening with the assistance of the finger in the rectum, using no force, and by a careful manipulation feeling first in one direction, and then in another, at last it will almost alone pass through into the rectum. It must be done gently, and a little practice will enable you to find the inner opening. You ascertain when it has passed through the opening by its coming in contact with the finger. If you do not find the opening the first day put off the operation to another day. Occasionally I have tried two or three times before I could discover the opening, but generally, if you have probes of different sizes, it is easily found. Sometimes the opening

is very small, and therefore requires a small probe. When you have found the inner opening, and the probe is in contact with your finger, you bend the end, and bring it out at the anus. Thus, the part towards the handle is seen projecting from the outer opening, and the other part from the anus, while the parts which are to be divided lie upon the groove of the director. I generally divide the fistula with a pair of curved knife-edged scissors, for they cut better than a bistoury. A bistoury tears, and you may cut your own finger if you use the sharp edge. Introduce the scissors along the groove of the director, and divide the parts that lie between the inner and the outer orifice. There is scarcely anything to be divided —not above an inch or an inch and quarter, but you divide the greater part of the sphincter muscle.

Having performed this operation, all you have to do is, to prevent the cut edges growing together. You have made it into a sore, some of the fæces go into the sore, but they do not lie and lodge there, and there is nothing to prevent this fistula, which is now made into an open sore granulating and healing. All you have to do is to dress the parts very lightly between the cut edges to prevent them growing together, and that must be continued till the cut edges are skinned over. You may then leave the parts alone, and the healing process will go on.

But suppose that the fistula extends high up by the side of the rectum, above the opening, and this fistula is burrowing, what is then to be done? I used to imagine formerly that it was necessary to lay open the whole sinus into the rectum, but it is a frightful operation to lay open so long a sinus. You do not know what vessels you divide. There is seldom much bleeding in dividing the parts between the inner and the outer opening, but if there be much the pressure of the finger and a bit of lint stop it directly. I remember a case where I divided a fistula some way up by the side of the gut, and the whole canal was filled with blood. It is true the bleeding stopped, and the patient got well, but still he might have died from hæmorrhage. The bleeding goes on insidiously ; you do not know how to stop it ; it is internal, you cannot take up the vessels, and you cannot make pressure in any efficient manner. But I am now satisfied, and have been for a long time, that the division of a fistula which extends above the inner orifice is quite an unnecessary proceeding. Upwards of twenty years ago, when I was first getting into practice, I had a patient with a fistula, which I divided, or, at least, thought I had done it. But one day, when examining it with a probe, I found a sinus running up by the side of the gut for several inches. It seemed as if one side of the rectum was completely dissected from the neighbouring parts, but there was a good opening at the lower part where I had divided the fistula. Not knowing what to do with the case I called in the late Mr. Cline, and observed to him that if I divided it the whole length the patient might die from loss of blood. He said, "You are quite right, but more than that, I do not think it is necessary, I would leave it alone." There was

a free opening below; the fæces could not escape so easily now, and get into the cavity above. I adopted his advice, and the patient got well without any trouble. I have since seen other cases of the the same kind. Where there has been a large sinus, connected with a fistula, I have laid open the parts between the inner and the outer orifice,—done nothing more,—and the patient has got well. If a very long sinus, and a very large cavity, heal up without being laid open, *à fortiori*, if there be a small sinus, and a small cavity, that will heal up too.

I now come to consider what is to be done in a case of fistula attended with some complication.

The external orifice of the fistula is sometimes at a considerable distance from the verge of the anus, perhaps two or three inches, and in some cases it is as far off even as the buttock. You may, if you please, perform the operation in the same manner. You may pass the probe in at the outer orifice along the fistula into the rectum, feel for the end of the probe in the bowel, and then divide the whole. This, however, is a very serious operation, and a very painful one; you may have considerable hæmorrhage, and under any circumstances there is a very large surface that is to be healed by granulation. But the fact is this extensive division of parts is really not necessary, and it may be avoided by proceeding in the following manner:—Introduce what I may call the probe-director through the external and internal orifice of the fistula, in the way I have described, and then feel for the probe at some little distance—we will say three-quarters of an inch from the anus. Having felt the probe in that situation, which you may generally do with great ease, with a lancet or double-edged scalpel make an opening through the skin and the adipose substance leading down to the groove of the director. You thus make a new external orifice to the fistula; you then withdraw the probe, pass it into the new orifice you have made, through that into the sinus, and then into the rectum. You then bend the probe, bring out the extremity at the anus, and with a pair of knife-edged scissors, divide the parts that lie over the director, and thus you obtain all that is wanted by a very small division of the soft parts. The fistula is prevented healing by the fæces escaping into it from the rectum and lodging in the narrow channel. Without some such cause as this the whole fistula would heal at once. It is true that the external extremity of the fistula remains undivided, but the fæces cannot pass into it, and in a very short time it heals spontaneously. The internal part is made an open sore; which must be dressed from the bottom, and it heals in the usual manner.

The matter, however, may have burrowed and made many sinuses —a sinus in one direction, and a sinus in another. Sometimes these complicated sinuses are confined to one side of the gut; in other cases they are formed on both sides of it. Before you proceed to the performance of an operation in these cases you must examine the patient very carefully, and it is very probable that three or four examinations will be required before you can ascertain the exact state of

the parts sufficiently to guide you in the operation. Introduce the forefinger of the left hand into the gut ; then examine the different sinuses, and ascertain whether there is one or more internal communications with the rectum. It very often happens that where there are several sinuses external to the gut, communicating with each other, there is one that is the original sinus, and which has an opening into the bowel. But sometimes there may be a double communication, and then your business is, if possible, to ascertain which is the original sinus, and to lay that open in the way I have already explained, while the others very often need not be touched at all. If the original sinus be made an open sore the fæces will not pass into the secondary sinuses, and there will be nothing to prevent them from healing.

I have stated that very often it is unnecessary to open more than a single sinus, but there are exceptions to that rule ; for there may be sinuses in which the matter lodges, and from which the matter that is formed does not freely escape. These sinuses require to be laid open, not for the purpose of preventing the fæces lodging in them, but on account of the secretion of the sinus itself, just as sinuses anywhere else, from which matter does not freely escape, may require to be freely opened.

I have already stated that if you conduct your examination carefully, and look for the internal orifice of the fistula in the right place, just immediately above the sphincter muscle, you will scarcely ever fail to find it ; that if you do not succeed on the first occasion, you will on the second or third. But sometimes the opening is so small, and the sinus takes such a circuitous course, that even after two or three examinations you cannot find it. This will occur sometimes, not very often, and what is then to be done ? Perhaps if you were to delay the operation still longer you might discover it, but the patient grows uneasy and impatient at the cure not being completed, and is anxious for something to be done. You must then do what Mr. Pott recommends to be done on all occasions, and which, though a bad practice on all occasions, is a good one sometimes. An artificial opening must then be made into the gut, and you must use the probe-director, or a common probe-pointed bistoury, just as you please. With the fore-finger of one hand in the rectum to assist you, you must, with the instrument, whichever you use, perforate the membrane of the gut some way above the sphincter muscle, and then divide the sinus. But this is, after all, a very unsatisfactory way of doing the operation, and you may rest assured that if you make an artificial opening and fail to find the real and original opening, in three cases out of four you will be plagued afterwards. You have made an artificial opening, but the original one remains, and you go on dressing the sore ; but there is a little infiltration of fæces and mucus into it that prevents its being healed. When you have to make an artificial opening in the way I have stated, I advise you to do something more. Having made the artificial opening, and laid the fistula open into the gut, take a straight probe-

pointed bistoury, introduce it into the rectum, turn its cutting edge outward, divide the sphincter muscle, and set that completely at liberty. No large division of parts is necessary for this purpose, but having set the sphincter muscle completely at liberty you will scarcely have any trouble in the healing of the sinus. This is better than merely laying open the sinus into the gut, where you cannot find the internal orifice; but it is not so good as the operation where you can find it, because you have more bleeding, you give the patient more pain, and there is a larger wound to heal. I may, however, take this opportunity of mentioning, that, although the bleeding from the division of the sphincter muscle is considerable at the time, yet it is never dangerous, because it is within reach. Probably, you may see the vessel that is divided, and can secure it by a ligature; but if not, a dossil of lint, dipped in a styptic lotion, laid on the part, and kept there by the finger of an assistant for half an hour, will always stop it.

I mentioned in the last lecture two classes of cases in which the fistula has no external orifice. In one of these there is a small internal opening, and the fæces having penetrated the cellular membrane external to the gut, an abscess has been formed which has burst into the rectum by another opening. In these cases, by making pressure externally, you may generally feel where the matter is lodged. One day the bag is empty, another it is full. Take the opportunity when it is full, and you can feel where it is situated, to make a puncture into it with a lancet, and having so done you reduce it into the state of a common fistula, except that there are two internal openings into it instead of one. You then introduce the probe into the rectum, and divide the fistula in the usual manner. You must, if you can, discover both the internal openings, and let them both be included in the incision that you make.

I stated that there was another case in which there was an ulcerated cavity in the neighbourhood of the rectum having no external communication, and where the orifice was originally not like a pin-hole, as in common cases, but sufficiently large to admit the end of the little finger. The ulcer has gone on until it has made a considerable cavity by the side of the gut, having no external opening; and here you are to proceed in the following manner:—The broad internal opening is always close to the sphincter muscle, and at the back part just opposite to the os coccygis. You must be provided with a probe, bent like the one on the table. The probe is to be passed into the rectum, and then drawn down again, so that the point may enter the ulcerated cavity. The point of the probe is felt under the skin; the skin must be punctured with a lancet, and you then introduce the probe-director through the aperture and divide the fistula in the usual manner.

Now, there is another form of fistula of the rectum that requires very especial notice. I cannot better explain what I mean than by mentioning the following case:—There was a middle-aged lady who had an abscess formed in front of the rectum. I imagine that it arose,

in the usual manner, from ulceration of the gut. The abscess burst close by the posterior margin of the vagina, and appeared just like a common fistula. She consulted a surgeon, who inadvertently treated it as such, and laid it open into the gut. But what was the consequence? He divided both the sphincter ani and the sphincter vaginæ, and the wound never perfectly healed. She was in the condition of a patient with lacerated perineum, and all the rest of her life was liable to an involuntary discharge of fæces, of course making her life miserable. I saw this case some twenty-five years ago, and it was, as you may suppose, a lesson to me ever afterwards. It is not very often that abscesses of the rectum do burst in this situation; I have only seen a few examples of it, but the case I have mentioned was sufficient to show me that some peculiar mode of treatment was necessary. How is such a case to be treated? I have seen two or three cases of this kind of fistula since, without having an opportunity of following up the treatment, and no such opportunity occurred till last year. A lady consulted me with a fistula communicating with the rectum in front, and opening externally just at the beginning of the vagina. I merely made a free division of the sphincter muscle on both sides so as to set it completely at liberty. I dressed the cut edges of the sphincter muscle, and it was a good while before it regained its complete usefulness. That was just what I intended. The discharge from the fistula immediately became very much diminished; it continued gradually diminishing, and when I last saw her, which was some few months after the operation, it appeared to me that the fistula was soundly healed. Why is it that the fæces get so readily infiltrated into the internal orifice of the fistula? Because there is an obstruction to their passage occasioned by the sphincter muscle. I divided that muscle, removed that obstruction, and the fæces escaped so easily that they did not get into the internal orifice of the fistula. I was led to adopt this plan of treatment from the course pursued by Mr. Copeland in another case. He says that he was consulted by a lady who had an ulcerated opening between the rectum and the vagina. He divided the sphincter muscle, set it completely at liberty, and after the lapse of some time the recto-vaginal communication was closed, and at last firmly cicatrised.

Having stated how these fistulous sinuses are to be laid open, let me say a few words about the dressing. First of all, if the operation be done in a proper manner, there is very little in general to dress—it is only a narrow sore that remains to be dressed. Do not cram it with lint; all that is necessary is to put a little lint between the edges to prevent them prematurely healing. The parts about the rectum are very often a little longer in healing, and it may be worth while to dress them with red precipitate ointment. When the parts are beginning to granulate you may hasten their cicatrisation, and the formation of new skin, by touching them lightly over with the nitrate of silver. It is very seldom necessary, except in complicated cases, to dress the fistula for any length of time; a few days' dressing is very often quite sufficient. As soon as the cut edges are skinned over the dressing is

hardly necessary, and it will save both you and the patient a good deal of trouble merely to touch the surface of the sore lightly every other day with the nitrate of silver. When the edges are fairly skinned over, the rest will skin over sooner without the dressing than with it. If you cram the part full of lint you occasion the patient a great deal of pain. I am sure that sometimes, from too much lint being crammed in, the matter does not freely escape, it burrows in the cellular membrane, and makes a fresh sinus.

There are some cases in which abscesses occur about the rectum, which may be confounded with that particular disease I have just described, and I shall explain them in order that you may draw the distinction between them. An abscess sometimes forms in an external pile. The patient has an external pile ; it inflames and suppurates, and on going to him you find the abscess just on the point of bursting. You open it and let out perhaps a teaspoonful or more of matter, but on passing in a probe it will not go up by the side of the gut. This is a very troublesome sort of abscess, it is very painful, the patient can hardly bear to go to the water-closet, and he has pain in passing the last drops of urine.

The treatment is very simple. You cure it at once radically by snipping off the external pile, abscess and all, with a pair of curved scissors.

The same thing will sometimes happen with an internal pile. The patient has an internal pile, inflammation takes place in it, an abscess forms and bursts externally, and you can pass a probe into the abscess in the inside of the pile. Here, also, the best way is, if the pile be small, to snip it off with a pair of scissors, or if it be not small to tie it with a silk thread round the base, and destroy it by ligature. I may here mention an error into which you will be liable to fall if you be not on your guard against it. When you introduce a probe into an abscess formed in an internal pile it very easily breaks down the slender wall of the abscess, and runs into the cellular substance under the mucous membrane. The cellular tissue offers so little resistance to the probe that it may pass in any number of inches between the mucous membrane and the muscular tunic without your being aware of the circumstance. I remember a case many years ago where a surgeon of great eminence in this town laid open what he thought was a sinus of two or three inches in length into the rectum. I am satisfied, from what I remember of the case and have since seen, that it was an abscess formed in an internal pile, and that what he supposed to be a sinus was neither more nor less than a space he had made himself by running the probe into the loose cellular texture.

It is necessary, in the very great majority of cases to lay the kind of sinuses to which I have alluded completely open into the rectum ; and I presume that it is from the analogy to fistula here that some surgeons have been led to think that this operation was necessary for all kinds of fistulous sinuses. I remember some very good surgeons in this town who used to think it was requisite to open

what is termed a fistula in perineo in this manner. There can be no greater error. A fistula in perineo is the same as a fistula in ano, except that it communicates with the urethra behind a stricture, whereas a fistula in ano communicates with the rectum above the sphincter muscle. The fistula in perineo is the result of some of the urine passing in from the urethra, and to lay it open will do no good, for it will not prevent the escape of urine going on. But this may be accomplished by dilating the stricture, and, in nineteen cases out of twenty, all that you have to do is, to dilate the stricture. Generally, by the time the stricture is dilated, the urine, finding a readier passage forward than it does through the ulcerated opening, it will not pass into the latter, and the fistula is usually healed by the time the stricture is dilated. If it be not completely healed by that time you have only to keep the stricture dilated for a considerable period by the introduction of an instrument every day, or every other day, and the fistula in perineo will at last heal. If it be a large opening it will take some months to heal, but still it heals spontaneously. There is only one kind of case in which it is necessary to lay open a fistula in perineo, and that is, where there is a sinus in the perineum into which the urine escapes, but which is so situated that neither the urine nor the matter secreted in the sinus can find egress. If there be a fistula in perineo under these circumstances it may require to be opened.

There are some fistulous sinuses that exist in the groin in connection with disease in the glands of the groin. Surgeons formerly supposed that these required to be laid open like a fistula in ano. They do require to be opened where matter lodges in them and cannot escape, or, at any rate, a counter opening will be necessary ; for there is no disposition to heal unless the matter escapes as fast as it is secreted ; but the mere laying open of the fistula will not cause it to heal, it will only prevent it extending. What hinders the fistula in the groin from healing ? The diseased gland at the bottom of it. If you wish the fistula to heal you must destroy the diseased gland, or bring it into a healthy condition. Sometimes it may be necessary to dissect out the gland or to destroy it by a powerful escharotic ; but in the greater number of cases, if you attend to the general health, the diseased gland recovers itself ; and so soon, and no sooner, will the sinus in the groin heal.

The same observation applies to fistulæ that are connected with dead bone. A fistulous sinus leading down to dead bone does not heal because there is dead bone in the bottom ; but if the dead bone comes away then the fistula will heal. It is needless to lay open the fistula to inject stimulating liquors into it, or to do anything till the dead bone has been removed. All that it is worth while to do is, if matter lodges in it, to make a counter-opening by which it may escape.

Lancet, Jan. 27, 1844, *p.* 561.

On the use of Mercury in Syphilis.—[In this lecture Sir Benja-

min does not enter into detail either as to the mode of exhibiting mercury in syphilis, or the cases in which recourse should be had to it, but makes some general and practical observations, chiefly on the cases in which it is to be avoided, stating in general terms that he depends more upon its use for the generality of cases, than upon any other known remedy. When Mr. Rose was so successful in curing syphilis among the Guards without mercury, he was obliged to have recourse to it when he entered into private practice.]

Now, I have said that in the great majority of cases mercury is the best remedy you can employ for the cure of syphilis, but then care must be taken that it is properly and judiciously administered. There are different ways of exhibiting mercury; it may be given internally by pills; it may be used in the form of ointment, or by fumigation. The mercurial preparations that may be given internally are various,—blue pill, mercury with chalk, calomel combined with opium, Plummer's-pill, iodide of mercury, bichloride of mercury, and some other forms.

I have often given mercury internally in the shape of pills. When you want to affect the system rapidly, as in iritis, pills are preferable, because the mercury affects the system sooner. A patient labouring under iritis is in danger of going blind, and you must remove it as soon as you can. You effect this much sooner by giving calomel and opium than by using mercurial inunction, and in slight cases the disease may be cured by mercury administered internally. There are a good many patients so circumstanced that they cannot take it in any other manner; at other times you are indifferent about the mode of administration; and in some cases you are compelled to give it internally against your inclination. Thus, upon the whole, there are a good many cases in which mercury will be exhibited internally.

But if you inquire which is the best way of giving mercury in cases of syphilis where the symptoms are not of the very mildest character, I must say that mercurial inunction is infinitely to be preferred to mercury taken by the mouth. Mercurial inunction, however, is dirty, laborious, and troublesome, and it makes the case public to the family in which the man lives. For these reasons it will be objectionable to the patient; but it has this advantage, it is much less liable to gripe and purge, and it cures the disease a great deal better. It does not damage the constitution half so much as mercury taken by the mouth; nay, I will go so far as to say that, except in the very slightest cases, you really cannot depend upon any mercurial treatment effecting a certain cure, or even giving a good chance of it, by any other means than inunction. You may very often patch up the disease by giving mercury internally, but it will return again and again, and you may cure it at last by a good course of mercurial ointment. But especial care must be taken that this is properly applied. If it be left to a patient he will rub it in for five minutes or so, whereas it requires to be rubbed in before the fire for three-quarters of an hour ere it enters; but by and by

the friction may be continued for a shorter period. Where the symptoms are not of the mildest character it is desirable that the patient should, if possible, be confined to the house. Mr. Pearson observed, long since, that going into the fresh air would undo the effect of mercury, and I never will be responsible for thoroughly eradicating the disease where the patient is at all exposed to cold, and where he does not lead a most careful and regular life.

In all cases where you employ mercury you have two objects in view,—first, to cure the present symptoms, and, secondly, to prevent their return. It appears to me that at the present day a great number of practitioners keep the first object only in view, and lose sight of the second. I have repeatedly seen persons who have taken mercury for chancre; it was healed in a fortnight, but a hard base has been left, and then in nine cases out of ten there has been secondary symptoms. If it be taken for a primary sore the patient should never leave it off until the hard cicatrix has disappeared. You must exhibit it until the sore has healed, and for some time afterwards; and the same plan must be pursued with reference to the secondary symptoms, or they will return. When the eruption has disappeared from the body it must be used as a prophylactic, to prevent the return of disease, for probably another month.

I should say that if a patient be confined to the house, or only allowed to go out a little once or twice a day, and if he be made to rub in mercury, and continues it for some time after the symptoms have subsided, the case being carefully watched, you will, in most instances, make a real and permanent cure of the disease. This is not the way in which it is administered by many practitioners now, but it is the mode in which it was done formerly. You must not suppose that we have made an advance in all departments of surgery; on the contrary, I am sure that in some we have gone back. I am satisfied that the mercurial treatment of syphilis, as employed by the late Mr. Pearson during a great part of his life, was as nearly perfect as possible, and it was much more successful than the less careful treatment of modern practitioners. Mr. Pearson was surgeon to the Lock Hospital, and having no general hospital to which to attend, the powers of his mind were very much devoted to this disease and to its treatment; and the practice which I have now recommended was that which he adopted. I had an opportunity of meeting him a great deal when I was first entering into practice, and I am satisfied that his mode of treatment was eminently successful. In his work on "Materia Medica" there is an article on syphilis, in which there are many excellent observations on mercury, treating the subject in detail in a way in which it is not my intention to do at present; but I refer you to that article as being well worthy of perusal.

Wherever you can, in the treatment of syphilis, make the patien take mercury in the form of unction if possible. It is the best plan to pursue in all cases, although it is not necessary in all cases; but

where the symptoms are severe, and a long course is required, it is the safest made of proceeding.

I will avail myself of this opportunity of stating the class of cases in which you may employ mercurial inunction with the greatest advantage. Children, when born, sometimes labour under syphilis, the father or mother having been affected with it—perhaps the father and not the mother. The child at birth looks thin, and is of small size, and instead of thriving it becomes still thinner. At the end of three weeks it is covered by a nasty scaly eruption; there is a sort of aphthæ in the mouth, and chaps about the lips and anus. I have tried different ways of treating such cases. I have given the child grey powder internally, and given mercury to the wet-nurse. But mercury exhibited to a child by the mouth generally gripes and purges, seldom doing any good; and given to the wet-nurse it does not answer very well, and certainly is a very cruel practice. The mode in which I have treated such cases for some years past has been this,—I have spread mercurial ointment, made in the proportion of a drachm to an ounce, over a flannel roller, and bound it round the child once a day. The child kicks about, and the cuticle being thin the mercury is absorbed. It does not either gripe or purge, nor does it make the gums sore, but it cures the disease. I have adopted this practice in a great many cases with the most signal success. Very few children recover in whom mercury is given internally, but I have not seen a case where this method of treatment has failed.

Mercurial inunction may be used in certain cases in which were mercury taken internally it would do absolute harm. For example, a gentleman had a nasty phagedenic sore upon the penis; it could not be said that he was in ill health before, and therefore there was some reason to believe that the disease was spreading from the intensity of the venereal poison. He had taken calomel and opium until the gums were sore, and he was decidedly worse under it. The disease destroyed a great part of the glans, and evinced no disposition whatever to stop. It resisted all modes of treatment until he was put on a course of mercurial inunction; its progress was then arrested directly, and the sore healed with great rapidity. I have seen several instances of the same character.

Lancet, Feb. 17, 1844, *p.* 676.

[On scirrhous of the female breast, and on the circumstances under which an operation ought or ought not to be performed, Sir Benjamin gives us the following:—]

Under what circumstances is the operation for the removal of a scirrhous tumour of the breast proper, and under what circumstances is it improper?

If there be a scirrhous tumour imbedded in the gland of the breast, and you remove the tumour, together with the part of the breast in which it is situated, leaving the remainder of the breast,

according to my experience the disease is certain to return; and this corresponds to a rule which I think applies to all cases of malignant disease—that is, that you have no security against the return of the disease unless you remove the whole of the organ in which it is seated. For instance, if there be fungus hæmatodes of the bone of the leg, the patient may have some chance if you amputate the thigh above the knee, but none if you cut through the tibia below the knee. If there be malignant disease of the femur, you have very little chance at all, unless you think it expedient to take out the thigh bone at the hip joint. I say, therefore, in cases of scirrhous tumour of the breast, if you perform the operation at all, where the tumour is imbedded in the breast, you must remove the whole of the organ. You may imagine that this is a thing very easy to be done, but you will not find it so in reality, for in amputating the breast, in a thin person, you will be very apt, if you are not extremely careful, to leave a small slice of the gland of the breast adhering to the skin, and I have no doubt that this small portion may, in some cases, form the nidus of future disease. The colour of the gland of the breast varies little from that of the surrounding adeps, the hæmorrhage causes confusion, and you must be careful in the dissection to keep the knife near the skin, not near the breast. But, in addition to this, in every case, when you have taken out the tumour, you should examine the surface, and see whether every part you have removed is covered by healthy adeps. If it be not, look on the middle of the flap of the skin, and see whether any small portion of the breast has been allowed to remain there.

So far, then, the success of the operation may depend mainly on what you do; but now let us see what are the circumstances that are independent of anything that you do, and which may induce you to think that there is no chance of the operation leading to an ultimate cure; and what are the circumstances that should lead you to hope that a permanent cure may be effected.

Scirrhous tumours of the breast may be divided into two classes; one, where there is a conversion of the gland of the breast itself into scirrhous structure, there being no well-defined margin; the other, where the scirrhous tumour is imbedded in healthy structure, as if it were altogether a new growth, there being a distinct boundary to it.

In the first order of cases, not only does an operation never succeed in making a permanent cure, but it rather hastens the progress of the disease, and the patient generally dies in two or three years, if not before, of effusion of fluid into the cavity of the chest.

Where the skin is contaminated there is no chance of the operation making an ultimate and permanent cure; and it may be contaminated in various ways. Scirrhous tubercles form in the skin, here and there, at some distance round the tumour, while the intermediate portions of skin appear to be healthy, and then an operation will never lead to a cure; for you cannot remove all the

contaminated skin. Where the skin is contaminated in this way, the progress of the disease is generally very rapid, and the patient dies in a short time from effusion within the chest. Sometimes the contamination of the skin developes itself in another manner. The skin becomes thickened and brawny, the pores are enlarged, as if you looked at them through a magnifying-glass, and you cannot pinch it up as you can healthy skin. This is also a very bad form of the disease. I have, however, performed an operation under these circumstances in two or three cases; the disease has always returned in the cicatrix directly, and the operation has appeared to hasten rather than to retard the fatal result. It does not matter to how small an extent the skin appears to be contaminated; if any portion of it is thus affected, the seeds of disease are in the neighbourhood, and although your knife may divide skin apparently healthy, yet it is not so in reality.

One effect of a scirrhous tumour of the breast, in a great number of cases, is to cause contraction of the lactiferous tubes which pass from different parts of the breast to the nipple, and this contraction gives rise to a drawing in or retraction of the nipple. I believe that this retraction of the nipple is to be regarded as very unfavourable to the ultimate success of an operation; for I suspect that the disease in these cases has always extended into the skin of the neighbourhood, and if you examine the skin in the neighbourhood of the nipple very carefully, you will generally find manifest indications of disease in it.

In many cases of scirrhus of the breast the skin is drawn over the tumour, and on looking at the patient, there is a sort of dimple over the tumour. Where this dimple is seen you may be almost sure that there is a scirrhous tumour beneath it, and when you examine it, you may feel it with the finger. The presence of this dimple is a very great objection to the operation, and there is little or no chance of a permanent cure. What is this indentation of the skin? I have dissected the parts, and I will tell you how it is produced. There is a small elongation of the disease which passes up from the scirrhous tumour, through the adeps, into the skin. There is a filament, as it were, of the disease, varying from a quarter to half an inch in length, extending from the scirrhous tumour to the skin above it, and the presence of the dimple indicates that the disease is not confined to the breast, but that the skin is already contaminated.

As the disease advances it contaminates the glands in the axilla. If the breast be inflamed, the glands in the axilla may be enlarged, just as glands may be enlarged from a boil or any other inflammation in the neighbourhood; but when there are large indurated glands in the breast, you may be sure that there is the same disease in the axilla—that the glands in the axilla are contaminated, and that there is no ultimate cure to be expected from an operation. You may say, remove the diseased glands from the axilla; I have done this myself, and I have seen it done by others, but I will tell

you what always takes place. Perhaps there appears to be only one enlarged gland in the axilla, you attempt to remove it, but when you have got into the axilla, you find that there are other glands contaminated in the same manner, though of too small a size to be perceived before.

I need hardly state that if the scirrhous tumour adheres to the parts below, to the pectoral muscle, or to the ribs, and the skin is ulcerated, there is no chance of a permanent cure from the operation.

You will sometimes find patients who, while they have a scirrhous tumour in the breast, have indications of some other form of malignant disease in other organs. One patient may have signs of malignant disease of the liver, another of the lungs, and another of the uterus. Of course, if there be any suspicion of the same mischief going on in internal organs, you will know that no permanent cure is to be expected by the removal of the diseased breast.

You must also take into account the state of the patient's health, her age, and her condition in other respects. If, for instance, an old woman labours under scirrhus of the breast, which is in a state of quiescence, you would never think of amputating the breast, because she may die first—the disease may out-last her.

Now, having taken away these cases, you will find, in practice, that there are very few left in which you will think it right to propose an operation.

What are the cases, then, in which an operation for the removal of the breast is proper? Where the skin is perfectly sound; where the nipple is not retracted; where there is no diseased gland in the axilla; where there is no sign of internal mischief; where there is no adhesion of the breast to the parts below; and where the patient is not very much advanced in life, I should say that there is a reasonable chance of an operation making a cure. I do not intend to say that in all the excepted cases there will be a permanent cure —far from it; but there will be in some instances, and the chance of it may be sufficient to warrant you in recommending the patient to submit to the operation. I have the satisfaction of knowing that several persons on whom I have operated under these circumstances are now alive and well, but who would certainly have been dead long since had I not had recourse to it. As long since as 1832 I removed a breast affected with scirrhous tumour, and the lady was alive and well last year. Since the operation she has married and borne children. Last year I was called to see a lady on whom I performed the operation as long ago as 1830, and there she was, still alive and well.

But besides such cases as I have last described, there are others in which the operation for a scirrhous tumour connected with the breast may be proper. There is sometimes formed on the surface of the breast a hard tumour, which feels like scirrhus; on cutting into it it looks like scirrhus, and I can give it no other name. It appears to be unconnected with the breast, but when you come

LIBRARY

to remove it you find that it is attached to the surface of the breast, just at one narrow corner. I have removed three tumours of this kind, leaving the breast uncut, except where I separated the tumours from it, and in each of these three cases the patient was alive and well some time afterwards. I do not know that in any one of these cases there was really a return of the disease.

Scirrhous tumours sometimes take place in the nipple, and I believe they are to be distinguished from similar tumours in the breast itself, and that there is a much greater chance of a permanent cure where they originate in the nipple than where they have their origin in the breast.

There may be cases in which you are justified in performing an operation for the removal of a scirrhous tumour of the breast, not with the expectation of effecting a permanent cure, but to obtain respite and relief, to prevent sufferings. But here you must use some discrimination, for if the skin be thoroughly diseased I do not believe that in one case you will do any good; the disease will return in the cicatrix so soon that the patient will derive no advantage whatever from the operation.

Take care not to keep the patient very low before the operation. What we used to call preparing a patient for an operation, by low diet on all occasions, was very injurious. The patient need not be stuffed and crammed before an operation; he should have his bowels emptied, but as to repeated purging and low diet, that is wrong both before and after any operation. An operation is a shock to the system, making a great demand upon the vital powers, and if you withhold the sustenance and stimulus to which the patient is accustomed, the constitution probably will not be able to bear the shock.

I have thus spoken of the operation for the removal of a scirrhous tumour of the breast, but this organ is liable to other malignant diseases. The observations that I have made apply to the one case as well as the other, but I think that where malignant disease of the breast has the form of fungus hæmatodes the chance of ultimate success is even less than where it has assumed the form of scirrhus. Fungus hæmatodes is a worse form of malignant disease than scirrhus, and in the few cases which I have seen of it in the breast, where the tumour has been removed by operation, the patient has always died within a short time afterwards from some disease of the lungs and effusion into the pleuræ. But, after all, I believe that malignant disease is essentially of the same character, whether it assumes the form of scirrhus, or fungus hæmatodes, or pancreatic sarcoma. Whatever the name given to them by pathologists may be, I believe that malignant diseases are all nearly related one to another, and that the remarks I have made respecting one are applicable to the rest.

I will illustrate this last observation, which, I think, it is of importance in practice you should not forget, by mentioning some cases. A woman had a scirrhous tumour of the breast, attended

with that brawny condition of the skin which I described as indicating a very bad form of the disease. There was a conversion of the glands into scirrhous structure, not a distinct tumour of the breast. She had also signs of disease of the liver and a discharge from the uterus. The woman died, and on examining the breast there was a well-marked scirrhous tumour; in the liver there was an equally well-marked tumour of fungus hæmatodes or medullary disease; and in the uterus that peculiar excrescence to which the late Dr. John Clarke gave the name of cauliflower excrescence of the uterus, and which he describes as a malignant disease. These three diseases, all of which are malignant, and to which different names have been given by pathologists, were associated in the same individual, and the preparations are now in the museum. But I have seen the same disease occur in succession, and I will mention a case in point. When I was a young man I went with Sir Everard Home to perform a private operation. A lady from the country had a hard tumour, apparently in the abdominal muscles, which he removed, and when we came home and examined it we found that a portion of peritoneum adhered to it, and that it was a well-marked case of scirrhous tumour. The wound healed very well, but some time afterwards another tumour formed in the cicatrix, and began to enlarge. She came to London again, and put herself under Sir Everard Home. The tumour was now larger than the first he removed. He operated a second time, but this tumour had none of the characteristic structure of scirrhus. I can only describe it by saying it was like the fibrine of the blood, without colour; laminated something like the buffy surface of a coagulum of blood drawn during inflammation and very slightly organised. The wound healed, but after a time another tumour formed in the cicatrix, and she again came to London. It was not thought worth while to remove this, it increased in size, occupied a great part of the belly, and she died. It devolved on me to examine the body, and the tumour now was entirely different in appearance from either of those which had been removed. It was a regular brain-like mass, a medullary tumour, or a tumour of fungus hæmatodes. In the one case three different kinds of tumour existed in the same individual at the same time; in the other three different kinds of tumour showed themselves in succession. So you will sometimes remove a tumour from the breast in various parts of which you have a different structure.

Lancet, *Feb.* 3, 1844, *p.* 593.

Mode of taking out a Fatty or Steatomatous Tumour from the Breast.—We know of no internal medicine, nor of any local application, that will disperse these tumours, and the only thing to be done is to remove them by the knife. This may be done when the tumour is quite small. I do not, however, generally recommend the operation at this period; first, because the tumour may never increase, and as long as it is small it is of no consequence; and secondly, because the operation is really more easy when the tumour

has attained a certain size. Still, it is better not to let the tumour go to any *very* large size; and for this reason, lest the pressure of the skin should cause it to contract adhesions to the neighbouring parts. Where such adhesions have taken place, the operation is rendered difficult, and you cannot be certain that you do not leave some small portion of it, which may be the nucleus of a future growth. As soon, then, as the tumour becomes large enough to be troublesome from its bulk, then you may dissect it out, and this is a simple operation, if you know how to do it, and very difficult otherwise. Make a free incision of the skin, not upon the tumour, but into it, cutting fairly into its substance. Do not spare the incision through the skin, but let it extend from one end to the other. Then lay aside your knife, and you will find that with the fingers you can easily separate the cyst that contains the adipose matter from the neighbouring textures, pulling out one lobe after another till at last the tumour remains attached only at one corner, that is at the point at which the vessels run in and out. You have no bleeding in any other part of the operation, but in this last part of it you will generally find one or two arteries which you must secure by ligature. When the tumour is situated under a muscle, the operation is to be performed in the same way, with this exception—that besides laying open the skin, you must freely divide the muscle, cutting across the fibres.

[Sir Benjamin gives a curious case which illustrates the value of liquor potassæ in some of these fatty deposits. It is as follows]:—

A man came to this hospital some seventeen or eighteen years ago, with a very odd appearance—an enormous double chin, hanging nearly down to the sternum, and an immense swelling at the back part of the neck—two great tumours as big as oranges sticking out one behind each ear. The patient stated that these tumours had begun to form three or four years before, and had been gradually increasing in size. They gave him no pain, but they made him miserable, and in fact had ruined him. The poor fellow was a gentleman's servant, and having such a strange grotesque appearance nobody would hire him. I gave him half a drachm of liquor potassæ three times a day, and gradually increased the dose to a drachm. This was taken in small beer. About a month after he began to take it the tumours were sensibly diminished in size. He went on taking the alkali a considerable time, and the tumours continued decreasing. It was just then that iodine began to have a sort of reputation, much beyond what it deserved, for the cure of morbid growths, and I gave him the tincture of iodine. It was curious that while he took the tincture of iodine he lost flesh generally, but the tumours began to grow again. Finding this to be the case, I left off the iodine, and gave him the liquor potassæ a second time. He took an immense quantity altogether, and left the hospital very much improved, being directed to continue to take the medicine for some time longer, off and on. I had lost sight of him for some time,

when I happened to be requested to visit a patient in Mortimer-street. I did not observe the servant that opened the door, but as I came down he stopped me in the hall, and said that he wished to thank me for what I had done for him. To my surprise it was this very man. He had gone on taking the caustic alkali for a considerable time, and you may suppose how much he was improved by his being able to get a situation as footman. There were some remains still of the tumours, but nothing that any one would have observed. I have seen some other cases of the same kind, and where I have had the opportunity of giving liquor potassæ it seemed to be of great service. But I have not tried it in every case, and I have been informed that in some other cases it has been tried to a great extent without the same good result.

I suppose that in those, as well as in the other cases of which I have just spoken, the liquor potassæ acts in this manner; the greasy part of the tumour combines with the alkali, is taken into the circulation, and is thus carried off. It was upon this hypothesis, at any rate, that I was led to give this alkali. Whether it be, or be not, the right explanation, I will not say, but of this I am certain, that the remedy is often a very efficient one. But may the liquor potassæ be taken with safety in such large doses? Indeed it may, if you dilute it sufficiently. You cannot take even half a drachm in two ounces of liquid without its being inconvenient to the stomach, but you may take a drachm and a half in a large quantity of liquid two or three times daily without any harm. The best liquid in which to take liquor potassæ on this and on many other occasions, is fresh small beer. It seems to me to act better in small beer than when it is given in other ways, and the beer does not disagree with the stomach, because the alkali combines with and neutralises the vinegar which it contains. It is the latter that disagrees with weak stomachs. The alkali and the vinegar together make a diuretic salt, and I suspect that this is advantageous; besides that the alkali is less ungrateful to the taste when taken in small beer than in any other way. However, there are some persons who really cannot take small beer, even with the alkali; and others, with whom small beer generally disagrees, can hardly be persuaded that an alkali alters its quality. If there be any reason for not giving it in beer, it may be given in milk and water, or clove-tea, or ginger-tea; but then it should be exhibited in smaller doses, because none of the alkali will be neutralised as it is by the acid of the beer. To do real good the alkali must be taken in large doses, and for a long time together—not for weeks, but for months. A patient may take it on and off for a great length of time without any mischievous effects.

Lancet, March 16, 1844, *p.* 816.

66.—REMARKS ON THE TREATMENT OF VESICO VAGINAL FISTULA.

By William Keith, M.D., Surgeon to the Royal Infirmary, Aberdeen, &c.

[Janet Shirress, aged 30, was admitted into the Aberdeen Infirmary, complaining of constant pain in the region of the bladder, and constant distillation of urine from the vagina. She was delivered in 1831 by the forceps, and 14 days afterwards the urine came away through an artificial opening in the vagina. This continued for seven or eight years, when she plugged the opening with a pint bottle cork, and for a time this succeeded, and she enjoyed comparative comfort till the cork slipped into the bladder and was followed by the usual symptoms of stone. For a time the urine flowed again through the fistulous opening, but as the symptoms of stone became aggravated she regained the power of retaining her water, and this so entirely before the close of the year, that she then passed the whole of her urine by the urethra. The irritation from the stone, however, became so intolerable, that it was resolved to crush it by the screw lithotrite. The fistulous opening was then large enough to admit a No. 16 catheter, having once been large enough to admit a pint bottle cork. When the stone and cork had been crushed, and the particles evacuated, the urine again passed freely through the fistulous opening, which, however, had become sufficiently small to allow a button-headed cautery, at a white heat, to be applied to it, so as to touch at once the edge all round. This was repeated in six days, again in 16 days, and lastly in 22 days, after which she continued quite cured.]

Several points of interest attach to this case. *First*, It affords convincing evidence, from the effect produced on the fistula by the presence of her calculus, that were a foreign body of a smooth and unirritating character, of sufficient weight, introduced into the bladder in cases of vesico-vaginal fistula—the body would act as a bullet-valve, and not only keep the patient dry, but actually *favour* the contraction of the false opening. After seven years in the above case, the opening admitted a pint cork, with so much ease that it slipped through, but after a foreign body was lodged in the bladder, nine months sufficed to reduce the opening to less than one-third of its previous size, and it could only have been during the latter six months of that period, that the cork could have acquired density and weight enough to operate as a valve plug. I would suggest a small thin bulb or bag of Indian-rubber filled with mercury. Should incrustation happen in the progress of the cure, a squeeze with a screw lithotrite, or percussor, or a long œsophagus forceps, would throw it off, and at last when the opening had contracted to such a size as to admit of its ready cure by the cautery, the thin bag could be easily burst or punctured, and then withdrawn by the urethra.

2*dly*. If asked, why I deprived myself of the bullet-valve, while cauterising in the above case?—I reply, that the constant straining

kept up by the rough stone, arising from the inflamed state of the mucous membrane of the bladder, kindled and kept up by its presence, obliged me to remove a source of irritation, sufficient to defeat, in more ways than one, any effort of nature at adhesion.

3*dly*. It is worthy of remark, that the application of the cautery inside the vagina occasions nothing deserving the name of pain; and this observation I have had repeatedly corroborated. The heat of the reflected rays may be felt; but I have never found patients say that they really felt pain.

4*thly*. It is advised by high authority, to allow of long intervals between each application of the cautery, that time may be afforded for the consequent contraction of parts: the advice is judicious; but it applies chiefly to cases where the orifice is large, and where there is much to accomplish in the way of closing in. My bullet-valve, will, in future, aid the process much in such cases; but I beg to remark, that where we have a fistulous opening of the size of a female catheter, for instance—and where, as in the preceding and succeeding cases, we are able at once to make the edges approximate, then I would urgently advise the frequent use of the hot iron, so as to keep up a raw edge, as well as a complete closure, thereby to ensure adhesion, and complete obliteration at once.

[Dr. Keith relates another very interesting case of vesico vaginal fistula, in which the repeated application of the button-headed cautery, in a way similar to the above, was equally successful.]

Lond. and Ed. M. J. of M. S., Jan., 1844, *p.* 13.

67.—ON THE TREATMENT OF ENTROPIUM AND TRICHIASIS.

By W. R. Wilde, Esq., M.R.I.A., Lecturer on the Diseases of the Eye and Ear, in the School of Medicine, Park Street, Dublin, &c.

[In endeavouring to lay before our readers the principal points dwelt upon in this paper, or rather treatise, of Mr. Wilde, it will not be necessary for us to enter into an explanation of the different forms of this disease, nor of the variety of methods which have been from time to time recommended for its relief. Entropium, or inversion of the eyelids, may attack one or both palpebræ, and in each case the whole, or only a portion of the tarsal margin may be inverted, or the eyelashes alone may be inverted without the lid partaking of the displacement, or there may be a preternatural development of hairs, a double row of eyelashes internal to the normal row, without inversion of the cartilage; but it is to the inveterate form of entropium, especially of the upper lid, where the inversion takes place in a chronic form, and where there is no more inflammation of the eye ball than that produced by the irritation and unnatural condition of the cilia, that Mr. Wilde now draws our attention. He thinks that in almost every instance it is the result of

thickening and contraction of the conjunctiva lining the lid, caused *in limine* by chronic inflammation; and then no doubt the first turn or vicious bend having been given to the tarsal margin of the lid by the mucous membrane, which is there so intimately attached that we might say it was inserted into the cartilage, the muscular apparatus attached to the appendages of the eye comes into play. If the internal surface of the lid be examined in this case, the conjunctiva will often be found in a state of chronic inflammation and frequently granular: in other cases the lid will exhibit a number of pale, shining, whitish coloured lines scattered over the surface of the conjunctiva, but chiefly running along its lateral edge, and resembling the cicatrices and contractions after the cure of granulations.]

Mr. Ware, on the supposition that entropium arose from the "ciliary edges" being "not only inverted, but likewise contracted in length," advises the "enlarging the circumference of the ciliary edges," and says, "this may be done either by an incision at the outer angle, or by a complete division of the cartilage called tarsus in the middle." Mr. Tyrrell and Mr. Wharton Jones still partially adhere to this form of operation.

This method not succeeding, Sir P. Crampton devised the operation so well known and so constantly practised in this country, of dividing the tarsal cartilage at its internal and external extremity; the former incision beside the punctum, and the latter at the external commissure, in order to include the tarsal ligaments; when, if the inversion (I write of the upper lid) is not removed, these perpendicular incisions are united at their extremities by a longitudinal one, running parrallel with the ciliary margin of the lid. The parts are held thus in an inverted condition by a suspensorium palpebrarum, for some days, in order *to restore to its natural position* the inverted cartilage. These are the principles of the operation; the subsequent dressing and after-treatment are known to most students in this city. In some cases, Sir Philip has been obliged, in addition, to glue down the lashes to the integuments, and to apply other mechanical means to bring back whatever deformity remained after the incisions. This method of cure was first propounded in 1804. In 1838, Mr. Guthrie writes: "Mr. Crampton's operation, then, as above described, appears to have succeeded perfectly in his hands; that it has been found insufficient in that of others is equally certain, arising, I believe, from the unequal effect produced by the suspensorium, and from its not acting in a sufficiently powerful manner, in the inveterate curvatures of the cartilage, on its bent extremities; and from attention not having been directed towards them, and the establishment of a countervailing force: all of which indications are necessary to be, and are, I believe, fulfilled in the worst cases, by performing the operation in the manner I shall point out.

Two perpendicular incisions, of from a quarter to half an inch in extent, or of a sufficient length to render the eyelid quite free, are made through the lid, one close to the external angle, the other at a short distance from the punctum lachrymale; and these inci-

sions are, he says, to be "continued, if necessary, by repeated touches with the scissors, until that part of the eyelid containing the tarsal cartilage is perfectly free, and is evidently not acted upon by the fibres of the orbicularis muscle, which lie upon it." The portion of the lid included in these incisions is now to be everted, and retained against the brow, when he continues, "if any lateral attachment be observed acting upon and drawing or confining the lid, it is to be divided, which is, in fact, still elongating the incisions:" but as these incisions, extended as they are, will frequently fail in turning outwards the incurvated margin of the cartilage, as is acknowledged by Mr. Guthrie himself, he recommends the division of the cartilage along its whole length, from point to point of the lateral perpendicular incisions, thus leaving the lid connected with the surrounding parts merely by the external integuments, and the fibres of the orbicular muscles. Not deeming this sufficient, or the vicious turn of the lid still remaining, he advises "a fold of skin to be cut away from that part of the eyelid included between the incisions," as close as possible to the ciliary margin of the lid; three or four ligatures are then passed through the divided edges of this latter incision, and made also to include the outer or lower edge of the lid itself, which is then retained upon the brow by means of these ligatures, fastened upon the forehead by pieces of adhesive plaster. "In order to prevent any attempt at union but by granulation, or a filling up of the incision, the edges are to be slightly touched with *sulphas cupri;* a compress and retaining bandage is then applied, but removed next day, when any adhesion that may have taken place at the angles of the incisions, is to be removed. On the third day the edges of the incisions are again to be touched with the sulphate of copper, the lid being still retained in its inverted position; when "in a few days more," continues the describer, "and especially by the continued elevation of the lid, the ligatures cut their way out, during which period the eyelid is gradually lowered, and by the time the incisions have filled up, it will have resumed its natural situation, and the cure will have been completed, with, however, two indentations in the ciliary margin of the tarsus, and it may be, the continued inversion of two or three detached and irregular hairs." This operation, it will be seen, differs from that *originally* described and recommended by Sir Philip Crampton, only in its magnitude and severity; in making the longitudinal incision of the conjunctiva, as recommended by Œtius and Sir Philip, extend through the cartilage, and in retaining the everted lid upon the brow, by means of ligatures, with greater security than could be achieved by the suspensorium palpebrarum. Mr. Guthrie very judiciously cautions the operator to avoid the division of the punctum, but observes, "that the operation, accomplished with all the care I have described, will still fail, if equal attention be not daily paid to the subsequent dressing, on which indeed more depends than on the operation itself; so much so, indeed, that I am disposed to consider inattention to it the most certain cause of failure.

Before I proceed to remark upon what appears to me the defects of this operation, let us turn to that recommended by Mr. Saunders, who, in recommending the complete removal of the cilia, and in describing the sufferings induced by the harrassing disease of entropium or trichiasis, most justly observes:—"This picture which I have drawn, although melancholy, is not overcharged. Considering that I am addressing men acquainted with human misery, it may be deemed superfluous; but I am anxious that this truth should be impressed on the reader's mind, that the excision of the tarsus and roots of the cilia, however severe and formidable in apprehension, is instituted for the cure of a most excruciating disease, and that the occasion demanding it is imperious." With this rule, so admirably expressed, I fully concur.

Saunders performed his operation thus: having placed a piece of thin horn beneath the affected eyelid, in order to afford a resistance behind, as well as to guard the globe from injury, he made an incision posterior to and along the whole length of the cilia, and extending from the punctum to the external angle, when the entire tarsal margin containing the eyelashes was dissected off. No subsequent dressing was applied, or deemed necessary; and in a few days union took place between the integuments and conjunctiva.

This operation was subsequently modified by Professor Jäger, of Vienna; and this I shall presently describe as that which it appears to me is best suited to the removal of entropium and trichiasis. When once a cartilage, particularly that of the eyelid, has become distorted, and has remained so any length of time, I have always found it a matter of exceeding difficulty to restore it by any artificial means to its natural position, even although the original exciting cause may be removed. During the summer of 1842, I was assisted by Mr. Hamilton and Mr. Grimshaw in two plastic operations, for the re-removal of ectropium, the results of burn and ulceration. In both of these, although the transplanted lid formed a perfect and sufficient covering to the eye, yet for many weeks after, that portion of the cartilage, which had been most distorted, and was, if I may so say, puckered by the original cicatrix, returned, in part at least, to its original position, and protruded at the palpebral aperture; nor could this defect be remedied till an incision was made, in both instances, through the lid, from without inwards; and the edges of the divided portion of cartilage having been drawn through the external wound, and retained there by sutures, the adhesion thus produced remedied the defect. And it is this difficulty of turning back an old inveterate case of entropium which often renders the operation by incision inefficacious, in the more advanced stage, which might have been, in all probability, cured by it in the earlier period.

All practical oculists seem aware of the inveterate and almost incurable bend or turn which the tarsal cartilage takes, and of its continued liability to return, even long after the operation. This was long since clearly proved by Saunders, who, in remarking upon the operation of incision, says: "althou by detaching it from the ex-

ternal and internal canthi, and by keeping it everted for a considerable time, until the incisions be healed, the ciliary margin may for a time be clear of the eye, yet this flattering appearance, increased by the temporary relief of the patient, together with the returning transparency of the cornea, the friction being taken off, is but of short duration. *The altered state of the tarsus, preventing its accommodation to the surface of the globe, is not corrected;* and so great is the tendency of this diseased substance to incurvate, that the inversion of the eyelid is very soon again confirmed."

I offer no excuse for these lengthened quotations from Mr. Saunders' invaluable work; they are so just, so practical, and it appears to me, so thoroughly based on long experience and extensive observation of this disease, and his opinions are so well expressed, that I feel they must have more weight than any thing I could offer on the subject. I was led to adopt views similar to these, from being applied to at my dispensary by numbers of persons who had been already operated on at various periods of their lives, by different methods, and by different individuals, for the cure of inversion and distortion of the eyelashes, in which, although temporary relief had been obtained by each surgical effort, still the unnatural condition of the cartilage and eyelashes returned in whole or in part, and the distortion of the margin of the lid, from the effect of the various operations, was not only disfiguring, but positively destructive to the mechanical adaptation of the appendages of the eye.

"The operation proposed by Dr. Crampton," says Saunders, "is highly successful, and, as I am inclined to think, unexceptionable in the earlier periods of the disease, before an unconquerable inclination of the tarsus towards the globe is produced; but in this ultimate and inveterate state of the disease, in which the contraction is often consequent on the cicatrization of the tarsus itself, it is altogether inexpedient." In commenting (I must say rather severely) upon this opinion, with which I perfectly coincide, Mr. Guthrie writes as follows: "But as the alterations I have made in Mr. Crampton's method render it, in my opinion, equal to the cure of every stage of the disease, and as so many more cases of it have come under my observation, and have been cured by the operation I recommend, since the publication of the first edition of this work, I feel myself bound to add, that any surgeon who shall mutilate his patient, without having previously tried it, and failed, will be liable to the severest reprehension." That, however, it will fail, even when performed according to the plan, and to the full extent, recommended by Mr. Guthrie, I have seen numerous examples.

The objections which, it appears to me, the operation by incision is liable to, may be summed up as follows:—It does not always remedy the inversion, and although it affords temporary relief in many instances, still the disease, as acknowledged upon all hands, is able to return, owing either to the vicious and determinate inclination of the cartilage, or to the original cause not having been removed. Judicious and ingenious as the operation of Sir Philip Crampton is in

the first stage of pure entropium, without any irregularity of the lashes, it is totally inefficacious where any extent of trichiasis is present ; and in a vast number of cases that I have seen after the operation, trichiasis did exist, and therefore the intention of the inventor has neither been fully understood nor acted upon. Sir Philip advises the insulation and eversion of that portion of the lid in which the inverted or irregular hairs are situated, but very frequently these hairs are scattered at irregular intervals, all along the ciliary margin, and each hair would require a separate operation for itself ; moreover, the trichiasis, either singly or in connexion with entropium, does not depend upon an unnatural position of the cartilage, but upon an irregular or vicious position of the hair itself, and therefore, to remove the hair from the surface of the cornea by means of any operation upon the cartilage, must be to place it (the cartilage) in an irregular and unnatural situation—all which objections are obviated in the operation by excision or extirpation.

The eyelids appear to be held in their natural position by the tendon of the orbicularis palpebrarum muscle, and also its fleshy fibres spreading over its surface, by the external integument, and by the conjunctival lining, especially those portions of it denominated external and internal ligaments. And upon the correct and accurate position of the eyelids depends the integrity and mechanical power of those capillary, and perhaps erectile-mouthed siphon tubes, the puncta lachrymalium. If, then, the margin of the palpebral fissure be divided, the sphincter power of the lids is lost ; the lower lid, from want of the support afforded it by the action of the orbicularis muscle, and its attachment to the upper lid, after some time, droops and causes entropium ; the puncta, no longer held in their natural position, do not take up the secretion thrown into the lacus lachrymalis, and the tears, instead of being urged forward by the action of the lids into that receptacle, distil over the eye through the fissures in the lid, and irritating the cheek, increase the eversion of the inferior palpebra. According to Mr. Guthrie's method, the portion of cartilage containing the inversion is completely detached ; and I have seen cases in which, in three months after, it lay flat upon the lid, with the eyelashes hanging downwards and forwards ; and so much difficulty was experienced in raising the lid, that the eye appeared to be affected with ptosis.

The operation, which I have been in the habit of performing for some time, the facility and good effects of which have been witnessed by numbers of my professional brethren, I will now describe ; merely premising, that it differs from that recommended by Professor Jäger only in one of its stages, and in the application of ligatures instead of allowing union by the second intention.

The surgeon should be provided, in the first instance, with a variety of horn or ivory spatulas, such as those originally described by Saunders, and figured in most works upon ophthalmic surgery. They should be made of different breadths and curvatures, to fit the varieties of palpebral apertures, and will be found much more con-

venient without than with the wire retractor usually attached to them, and they should be at least four inches in length. The patient being settled in a high backed chair, or with the head resting against the breast of an assistant, the spatula is to be inserted beneath the upper lid, for at least half an inch of its length, and held firmly in that position by the left hand of the operator, which rests against the cheek of the patient; the assistant then, with the fore-finger of his right hand, draws upwards and presses against the superciliary arch the integument of the lid, so as to put it completely on the stretch, and likewise evert, as far as possible, the lashes, which the operator holds down upon the spatula with the thumb nail of his left hand. Before proceeding farther, the surgeon should make himself thoroughly acquainted with the exact position of the punctum, in order to keep clear of it in the subsequent incision. It may also be remarked, that the more the parts are put upon the stretch, the greater will be the facility experienced in the subsequent stages of the operation, and the more perfect will be its results; therefore, the spatula employed should be accurately fitted to the extent of aperture in each individual case. With a small fine scalpel, more curved than usual towards its point, and having a small indenture in its back, towards the extremity, an incision is to be made through the external integument, parallel with, and about the eighth of an inch behind the ciliary margin of the lid; commencing in the right eye at the external commissure and ending at the punctum, and vice versa in the left. In this incision, which may be varied in its extent from the edge of the lid, according to the quantity of external integument which it may be desirable to remove, the fibres of the orbicularis muscle must be in part divided along their longitudinal course, for the cartilage should be reached at one cut; and the extremities of the incision should likewise curve abruptly downwards, in order to leave no nodulated or rugged margin to the lid in the subsequent process of healing.

Considerable hæmorrhage always follows this incision, the parts being naturally exceedingly vascular, and rendered more so by their diseased condition. Professor Jäger and most operators now complete the excision of the tarsus by slanting the blade of the knife downwards and inwards, and so *slicing off*, by repeated slight incisions, that portion of the lid in which the cilia are placed, and cutting on the spatula, which affords a firm resistance behind as well as a protection to the globe itself. A much simpler and more efficacious plan will be found in throwing aside the spatula, and laying hold of the external angle of the margin of the lid with a fine toothed forceps. Then, standing, not in front but on one side of the patient, so that the parts may be seen in profile, with the knife held in that position that its blade crosses obliquely the margin of the lid, from the external tegumentary incision to a point a little internal to the centre of that flat surface which the lids present to each other when closed, it is made to traverse, with its back kept towards the operator, the whole extent of the part to be removed,

while the forceps retained in the left hand draws forwards the slip containing the eyelashes, till the incision is complete; the assistant still preserving his original position. By this means there is nothing whatever removed from the length of the cartilage, and the cilia, by not being inserted in, but *lying on* the cartilage, are completely removed, and by thus taking off the slip in profile, we see exactly how much we are removing, and can also guard with greater accuracy the punctum.

The whole of what I have now described need not occupy above a minute, and the pain, though it is certainly very severe, is in no wise equal to that experienced in the operation by incision, at least if the patient's expression of feeling is to be taken as a test of such. Upon examining the inner portion of the surface removed it will be found studded over with the black bulbous roots of the eyelashes, which are generally all removed by the incision; the excised surface of the lid, however, must be accurately examined to see that no root remains, and until the surgeon is assured of this he has not completed his operation. The bleeding is, as I have said, very profuse, and in some cases,—those which may be denominated vascular persons,—two or three small arteries, branches of the superior palpebral, pour out *per saltum*. The surgeon must, however, wait patiently till all this ceases, and the assistant should continue to keep the lid elevated, as by closure or turning in upon the eye the hæmorrhage will be decidedly increased; a little cold water and the action of the air will, however, soon arrest the bleeding, at least to an extent sufficient to allow of such an examination as will enable the operator to observe the divided root of any remaining hair, which is fortunately always of a dark colour, no matter what may be the complexion of the patient. Such roots should be laid hold of with a fine toothed or a ciliary forceps, and removed, along with some of the surrounding cellular substance, by the scalpel or a curved scissors, for if these points are only plucked out there is a possibility of the hairs growing again.

Many operators are now content with the application of water dressing, and allowing the parts to contract and adhere as best they can; such was the mode of treatment adopted by Mr. Saunders, who, however, adds: "in all the patients on whom I have operated, a fungus of considerable size has sprouted from the centre of the section." This induced me to employ two or three points of suture passed by means of a fine sewing needle, first through the thin margin of the cartilage, and then including the external integument which is thus brought in accurate apposition with the conjunctival lining of the lid. By inserting the central one first, and, through its means, holding the lid slightly everted, the two others can be passed with great facility; they are then cut off close, and removed about the end of the third day, when the wound is generally healed, and no further trouble is experienced, the cornea clearing, and the irritability, epiphora, winking, and chronic inflammation of the parts gradually subsiding. I seldom see the patient again till it is

time to remove the ligatures on the third day, but recommend the application of cold water in the interim. The hæmorrhage is generally very salutary, and in thirty-six cases on which I have operated no inflammation worth remarking upon occurred.

A greater change, not only in the eyes themselves, but in the whole appearance and expression of the countenance, cannot possibly be imagined, than that produced in a very few days by the operation that I have now described ; the offending bodies being removed, the lids open wide, the head is held erect, and the patient has in truth

"Smoothed his wrinkled front ;"

for the brow, before so rugous and contracted, has now become expanded ; the frown has given way to a smile, and the whole bearing of the individual is that of ease and cheerfulness, and all this has been purchased with the loss of the diseased eye-lashes ! Yet this has been denounced as a "most cruel proceeding," a "dreadful operation," and a "mutilation," for which the surgeon who has not previously resorted to the method of Mr. Guthrie is deserving of the "severest reprehension ! !"

In conclusion, the advantages of extirpation, no matter how performed, over all other operations for the removal of inveterate entropium, may be thus enumerated :—the complete removal of the cause of irritation, there being no danger of return, there being no deformity produced, no dislocation of the puncta, no subsequent stillicidium lachrymarum, no falling or eversion of the lower lid, the integrity of the cartilage being preserved, and the Mibomian glands, which Saunders must have cut across, being for the most part left entire.

In three instances I completely removed the cilia in both lids of the same eye, and with the most beneficial effect. The lower, however, except when affected with severe trichiasis, can be much more frequently cured by the removal of a portion of integument, or the application of an acid, than the upper one.

When an elliptical portion of integument is removed, I have only to remark that it is generally too small ; and as far as my experience of this operation extends, unless some fibres of the subjacent muscle are also removed with it, and the ligatures made to include the muscle and the integument, by which means an adhesion is produced that afterwards acts as a counteracting force against the internal contraction of the conjunctiva, little good will result. Furthermore, the upper edge of this elliptical incision should be made as close as it possibly can with safety to the ciliary margin of the lid : it is in general made at too great a distance from it.

A single lash, or one or two lashes, will sometimes turn in upon the eye and produce the greatest annoyance ; the patient gets tired of plucking them out, and applies for surgical relief. In such cases placing the horn spatula within the lid, I make an incision with a small knife down to the root of the inverted lash, and, having waited till the

hæmorrhage has ceased, I apply a point of nitrate of silver by means of a small *port-caustic* (such as I have already described among the ear instruments), down to the bottom of the wound, and *then* remove the lash; it seldom fails, but frequently it destroys two or three of the neighbouring cilia. Partial distichiasis also, or more extended trichiasis, may likewise be successfully treated by the same means. In the operation of extirpation for entropium, a single lash, or sometimes two or three, may escape the notice of the operator, and will re-appear in a few days after the operation, though not always in an inverted position. Such cases may be treated by incision and the nitrate of silver, or, what is simpler and less painful, laying hold of the surrounding skin and cutting out a V shaped portion with the root of the lash.

Dublin Journal of Medical Science, March, 1844, *p.* 111—133.

68.—ON CONICAL CORNEA.

By James H. Pickford, M.D., &c.

[Dr. Pickford has written a most elaborate and learned paper on this interesting subject which was read before the Association of the King and Queen's College of Physicians Dublin. It is a disease which has baffled the skill of the most experienced ophthalmologists. Dr. Pickford first refers to the generally received opinions of the nature of the malady, and to the common mode of treatment, and then explains his own views of the same.]

In the disease under consideration the normal convexity of the cornea is lost; a transparent conical structure, apparently differing in no particular from the natural texture of the cornea, unpreceded and unattended by pain or inflammation, supplies its place; the cornea is prolonged forwards, and presents to the observer a peculiar dazzling, sparkling point of brilliancy, a dew-drop, or gem-like radiance, as though a piece of solid crystal were embedded in its centre.

This appearance is occasioned by the excessive refraction, by the corneal cone, of such rays of light as pass through it, together with the reflexion, in due relation to the incident angle, of a certain portion of all rays impinging upon its surface.

In extreme cases it is not unusual to find the apex of the cone opaque. This may arise from inflammatory action, occasioned by the friction of the lids upon the corneal projection, or by other causes, to which an eye of this peculiar form must be subjected.

Should this inflammatory condition be excessive, ulceration and staphyloma may be the consequence.

Patients, when first attacked, become myopic, but, as the disease increases, are unable to distinguish small objects, even in the direction of the axis of the eye, unless held within an inch or so of the cornea. All direct and useful vision is now, nearly, if not totally,

intercepted, though, on the temporal side of the eye, even minute objects are easily discerned.

Various remedies, both general and local, have been prescribed for its cure or relief; all have failed, even in arresting its progress.

Some practitioners recommend the application, once a week, of a leech or two, to the lower eyelid or temple. Others advise bleeding, frequent cupping, issues to the temples, perpetual blisters and astringent collyria; some one thing, some another.

Some writers, believing it to depend upon an excess of aqueous humour, the consequence of a dropsical tendency, have administered "calomel, &c., internally, with a view to excite the action of the absorbent system, and thus remove the increased quantity of aqueous humour from the anterior chamber, but without the least success.

Others have evacuated this fluid, unmindful of its exceedingly rapid renewal: for, so soon as the puncture is sufficiently healed to bear its pressure, so soon will the chambers be filled with the fluid as before the operation. No permanent relief of any kind, neither benefit to vision, nor mitigation of the disease, can therefore arise from so inconsiderate a mode of treatment.

There are others who recommend constant and well directed pressure on the apex of the corneal cone. The futility, not to say mischief, of this unscientific plan is self apparent. It is replete with objections, exclusive of the utter hopelessness of its effecting a cure. Its advocates expect to occasion, by these means, absorption of the apex of the cone, and, ultimately, of the whole of the transformed cornea. If Jäeger's account be proved to be correct, and if the apex of the cone be, as he states, not thicker than "writing paper," what must be the state of the patient's eye after it had been subjected to pressure, sufficiently long to answer the proposed end? Would not the remedy here be infinitely worse than the disease?

Some writers, satisfied, after the most ample experience, of the insufficiency of remedies, content themselves with doing nothing.

Sir William Adams broke up the crystalline lens, in order, as he states, that the rays of light might fall upon the retina, and not be brought, by the increased refractive power of the cornea and lens, to a point far short of the sentient apparatus of the organ of vision.

Sir John F. W. Herschel, speaking of "short-sighted persons," says, "they have their eyes too convex, and this defect is remediable by the use of proper lenses;" and he then refers to the operation under consideration in the following terms:—"There are cases, however, though rare, in which the cornea becomes so very prominent as to render it impossible to apply conveniently a lens sufficiently concave to counteract its action. Such cases would be accompanied with irremediable blindness, but for that happy boldness justifiable only by the certainty of our knowledge of the true nature and laws of vision, which, in such a case, has suggested the opening of the eye and removal of the crystalline lens, though in a perfectly sound state."

Sir John proposes to remedy the defective vision arising from malconformations of the cornea, "by adapting a lens to the eye, of nearly the same refractive power, and having its surface next the eye an exact *intaglio* fac-simile of the irregular cornea." "Should," says he, "any very bad cases of irregular cornea be found, it is worthy of consideration, whether at least a temporary distinct vision could not be procured, by applying in contact with the surface of the eye some transparent animal jelly contained in a spherical capsule of glass; or, whether an actual mould of the cornea might not be taken, and impressed on some transparent medium. The operation would of course be delicate, but certainly less so than that of cutting open a living eye, and taking out its contents.

Entertaining the highest possible respect for the opinion of so eminent an authority as Sir John Herschel, and for the talent and labours of Sir William Adams, I must be permitted to question the "happiness" of that "boldness" which has suggested the removal of the crystalline lens as a remedy for the depraved vision of those afflicted with the disease under consideration.

The circumstance, alone, of the operation having fallen into disuse is, in itself, sufficiently condemnatory of its supposed utility. Could but the rays of light, with accustomed regularity of convergence, reach the lens, all would be well; a deep double concave glass, by occasioning a prior divergence, would remedy the defect of vision; but, could they do this, one of the very peculiarities of the disease itself would vanish, and cease to exist; for, were the refractive powers of the cornea merely "increased," and not in excess, all rays entering it would pass onwards to the lens and retina, without producing that peculiar sparkling, luminous appearance, that diamond-like radiance before mentioned; one of the essential characteristics of the disease.

The removal of the lens from the axis of vision cannot, I contend, produce any effect upon the corneal cone; for this it is which refracts unduly, and in excess, the rays of light falling upon the upper portion of its surface, and offers a permanent barrier to their reaching the lens with their ordinary convergence and regularity.

Until, therefore, the external form of the cornea be changed,—until this conical projection, be it a solid cone, be it, on the contrary, a hollow cone, with vertex of extreme tenuity, increasing in substance towards the base, be got rid of, all, or nearly all, the pencils of light incident to the upper portion of its surface must be unduly refracted, producing excessive and irregular convergence, and consequent confusion in the direction of the rays of light, for which nothing can compensate, which nothing can rectify, neither the abstraction of the natural lens nor the superaddition of an artificial one. Hence, I repeat, the removal of the lens is uncalled for, injudicious, and indefensible.

The late Mr. Tyrrell hit upon a very ingenious, though very inefficient expedient for remedying the defective vision. "It consists

in altering the position of the pupil, and removing it from beneath the centre of the cornea, or that part which has its figure most changed, to near the margin, where the least change has occurred; the error in refraction is consequently much lessened, and the vision becomes more perfect, and the focus lengthened." This he effected by puncturing the outer and lower part of the cornea with a broad needle, and then dragging into the wound and strangulating it there, the pupillary margin and so much of the temporal portion of the iris "as is requisite to cause the pupillary opening of the iris to change its position, from the centre to the outer and lower part of the cornea."*

By this "simple plan," he says, he has "benefited the vision, and in two cases very considerably." It is evident, however, that the beneficial effects of the operation upon vision must have been of an exceedingly limited and one-sided character.

[Dr. Pickford proceeds to detail the mode of treatment which he has found most successful. In the first case recorded, the treatment consisted principally of iodine internally and externally, with an emetic of 25 grains of sulphate of zinc early in the morning twice a week. The emetics were afterwards repeated every morning, and in six months she was much relieved, but not entirely cured. In consequence of the suggestion of Mr. Guthrie in the London Medical and Surgical Journal, vol. 1, p. 361, and in his lectures in 1832, Dr. Pickford determined to make use of emetics and purgatives only, without iodine, combining the aperient with the emetic as prescribed by him. In his next case, therefore, he prescribed as follows:—

Zinci sulph. ℈i. magnesiæ sulph. ℥iv. primo mane quotidie sumend.

This emetico-purgative plan was continued for upwards of twelve months, when she was discharged perfectly cured. The disease returned, however, in about eighteen months, and was cured a second time by the same means.

Another case of a similar kind is added, in which one grain of tartarized antimony with half an ounce of epsom salts were given every morning for a considerable period with almost equal success. Dr. Pickford, however, prefers the sulphate of zinc. He ends his paper by an attempt to explain the rationale of this treatment, and the probable pathology of the disease—views, which, in the words of Mr. Middlemore, "appear calculated to effect a greater advance towards its correct and successful treatment than has been hitherto accomplished by the united labour and research of all preceding writers." We have only space for the following remarks of Dr. Pickford, which, however, seem to embrace the whole of his views of the pathology of the affection.]

Diseased action having been once set up, whether in the absorbent

* This plan, however, was, we believe, first suggested by Mr. Middlemore, and published in his work in 1834.

or nutrient vessels matters not, either removal of, or additions to parts existing must ensue. Hence, if the absorbents be over active, thinning of the cornea would result, whilst nature, ever anxious to repair an evil, would be busied in depositing new matter, *externally*, to counteract the ill effects of the increased action of the absorbents going on *within*. This will explain the *growth* of the disease, and also the irregularities of the external surface of the corneal cone, described by Sir David Brewster ; the central and internal depression, with circumferential thickening, found by Jäeger ; the hollow cone with vertex of extreme tenuity, gradually increasing in substance towards the base ; and will, at the same time, account for "the laminæ being less moveable upon each other," as described by Mr. Middlemore, and, also, for the cornea not "giving way," upon the principle of its elongated form being *the product of growth*, and not, as Mr. Travers states, "the consequence of its having lost its natural resistance to the pressure of the contents of the globe."

Hence, I feel I am justified in stating that I believe conical cornea, *ceratoconus*, to depend upon faulty action, induced by debility of the nerves of the cornea, of its absorbent vessels, calling for an increased deposit from the nutrient capillaries, to repair the mischief arising from such faulty action.

The disease is analogous to hypertrophy, with dilitation, of the ventricles of the heart, and to aneurism.

I would merely glance at the possible similarity of arrangement which the vessels and nerves of the cornea may bear to those of the membrana pupillaris. Converging, as they must, more or less, like rays to a centre, it would result, that the central part of the cornea must be the point where all meet. If, then, by impaired nervous energy, faulty action be communicated to the nutrient and absorbent vessels, we should have undue absorption and deposit at this identical point.

It may be replied that, admitting the reasoning to be just, I am here making general what ought to be considered the exception, and that, with this notion, every one ought to have conical cornea. Not so ; the exception is the faulty action of the vessels, the consequence of some particular constitutional tendency. I merely speak of their probable arrangements, terminations, and commencements. In a state of diseased action, with such an arrangement, I think it more than probable that such a result might be foreseen and calculated upon.

I shall now, therefore, submit the probability, in the disease under consideration, of gastric or intestinal disturbance or irritation, inducing, through the medium of the par vagum, sympathetic, and ciliary nerves, faulty action of the absorbent and nutrient vessels of the cornea, the combined effect of which would be conical cornea.

Had the time permitted, it was my intention to have discussed, more fully, the rationale of the treatment before detailed.

I must now content myself with remarking, that whatever would restore the healthy functions of the nerves, or increase the energy

of the nervous system, so as to communicate to the capillaries of the part a tone or power to resume their healthy action, would give a check to the disease, and that a continuance of healthy action would allow time for the cornea to re-acquire its normal form and refractive powers.

We have not a sufficient number of recorded experiments to determine directly the influence of the nerves on the action of the capillaries.

I cannot, however, on this point, do better than quote the words of my friend Dr. Billing. "Let us see," says he, "how far we can go in proving that the *capillaries depend* upon *nervous influence* for their contractile *action*. Blushing is, perhaps, the most unequivocal proof that an alteration in the nerves is the cause of sudden dilatation of the capillaries. It is not the action of the heart alone which causes the partial flush; for, first, the heart often acts stronger without causing blushing; and next, the blush is partial; whereas, when the mere action of the heart causes increased redness of the skin, as from exercise, it is not partial, as it is in blushing from mental emotion. And this, which is sudden weakness of the capillaries, has been commonly attributed to the 'increased arterial action,' and 'determination to the face.' I attribute this giving way of the capillaries to derivation of the nervous influence, which, being directed to or expended in the brain more freely by mental emotion, robs, for the moment, the capillaries of the face of their energy."

The same writer has shewn that "emetics and purgatives possess a sedative and constringent power," and that "antimony exerts a locally tonic or astringent effect on the capillaries of inflamed congested parts, as well as on those of all the secreting structures."

It is worthy of consideration how far small and constantly-repeated doses of antimony, or of any other metal, such as mercury, zinc, or copper, may produce the same beneficial effect upon the disease as emetics with purgatives. Formerly, fever was treated by the daily exhibition of emetics. We now obtain equally good results from small and oft-repeated doses of antimony.

The disease in question consists, essentially, in debility and elongation of the capillaries of the part, with morbid deposits. The cure, in their retraction by means of tonics.

It would occupy too much of our time to enter as fully as the interesting nature of the subject demands, into the different forms of sympathy, and their application in the treatment of disease. On these points the ably written chapter on "Sympathies," in Baly's translation of *Müller's Physiology*," will amply repay an attentive perusal.

In conclusion, I may repeat, that I believe conical cornea to depend upon some disturbance in the functions of the great sympathetic, spinal nerves, and par vagum; producing, through the medium of the lenticular ganglion and fifth pair of nerves, faulty action of the nutrient capillaries, and absorbent vessels of the cornea

itself ; that emetics and purgatives, by the powerful influence they induce upon the gastric, associate, and consensual nerves, restore the healthy functions of the weakened nutrient and absorbent vessels, the result of which is a slow but progressive retraction of the diseased corneal growth, and a consequent restoration of vision.

Dublin Journal of M. S. Jan. 1844, *p.* 357—387.

69.—ON EXCISION OF THE SUPERFICIAL LAYERS OF AN OPAQUE CORNEA.

By Robert Hamilton, M.D., F.R.S.E., Surgeon to the Edinburgh Eye Infirmary, &c.

[We think that we are more indebted to Dr. Robert Hamilton than to any other British surgeon, for constantly bringing before us the most improved methods of treating diseases of the eye among the German surgeons. We have already recorded some of his very valuable communications, and the following is not less interesting than his former ones :—]

Dr. Gulz, lately *chef de clinique*, and assistant to Professor Von Rosas at the great Ophthalmic Hospital in Vienna, has lately succeeded in restoring vision to one of those unfortunate individuals who had become blind from extensive opacity of the cornea, by excising the opaque anterior portion, leaving only the posterior normal part, which healed without losing its transparency, and left permanently a clear aperture available for all the purposes of useful vision. This success to an almost unlooked-for extent, together with very decided relief in some other cases, has led him to anticipate a like result in similar instances ; and has induced him to support the thesis, that there are cases in which excision of the opaque cornea will be effectual in restoring permanent vision to the blind. This important proposition in ophthalmology, together with a brief narration of the cases just referred to, will form the subject-matter of the following memoir.

It is of primary importance that the *precise nature of the cases to which the proposed method is applicable* be clearly understood ; as otherwise, mistakes and injuries will be the necessary consequence.

In these cases, then, as in the somewhat allied class belonging to the head of artificial pupil, it is absolutely necessary, that the *sentient portions of the eye be in their normal condition*, and that the defect of vision arise solely from some obstruction of a mechanical nature interfering with the admission of the rays of light. The morbid conditions inducing such obstacles need not be enumerated ; but in all, though the obstacle to distinct vision be complete, yet the perception of light must never be destroyed ; and the practical surgeon will seldom or never have any difficulty in discovering that the nervous parts of the organ still preserve their integrity.

Again, and to be somewhat more particular, there must be no *anterior synechia*, nor any *closure of the pupil*. No words are necessary to enforce this proposition. Were the cornea rendered ever so clear, both the abnormal states here specified would form insuperable obstacles to vision; and we are not yet in a position to advise that the operation on the cornea should be attempted, in the hope that a second one for artificial pupil might restore the sight. The existence of *staphyloma*, we may add, must always diminish the prospect of success. With the majority of oculists, we hold that in staphyloma the iris is usually involved, adhering to the remaining cornea, or to the cicatrix-tissue which supplies its place. Notwithstanding this unfavourable state of matters, it is interesting to know, that some such cases have been noticed in which very tolerable vision has been retained. Two instances of this kind will be brought under review in the sequel, so that even in these cases all hope must not be abandoned;—hence then, the appropriate cases for the method about to be detailed are reduced to those affections of the cornea which are classed as *simple opacities*. And even here it is necessary to discriminate. The obscurity of the cornea arising from the thickening of its conjunctival covering, constitutes the proper pannus of oculists, and is to be treated upon the general principles alluded to in the paper previously read to the society. The slighter varieties of opacity, whether of general cloudiness or of local film, and even the more obstinate forms of albugo and leucoma, must be treated upon other principles; and hence the fitting cases for this operation come to be those in which there is a very considerable obscuration of the cornea proper, covering the whole surface of the membrane but not extending throughout its entire thickness, without synechia, and with the integrity of the sentient apparatus.

And such cases are unfortunately too common. They are found in strumous subjects as the result of that obstinate disease known as the vascular albugo of oculists; also, of Egyptian and other virulent purulent ophthalmiæ; likewise, in cases of severe corneitis, with effusion of blood and lymph between the layers, and, not to dilate more, in certain of those cases of violent inflammation, induced by the introduction of lime and such matters, which, by their chemical action, almost immediately destroy the superficial layers of the membrane, and penetrate to a certain but limited extent. The result of accidents and diseases such as these, is to induce a state of the cornea, in which useful vision is lost, and where all attempts at relief are usually abandoned in despair.

Certainly it is not a little vexatious to the surgeon to know, that in all these cases the more noble and important parts of the organ are still entire, and that a mere chink or aperture is all that is desiderated for satisfactory vision. It is this condition of the parts which has led the first oculists of their time so much to tax their ingenuity and skill in endeavouring to overcome the apparently trifling obstacle;—that led the University of Munich to offer an honorary prize to the individual who would indicate how the difficulty might

be overcome;—that has led such men as the elder Autenrieth, Beer, Ammon, Henle, and Guthrie, in cases of opaque cornea, and of staphyloma, themselves to undertake, and to recommend to others, the operation of *sclerectomia*,—the operation of simply removing a minute portion of the sclerotica and choroid, near the corneal margin, so hoping for a vicarious or artificial pupil;—or the modification proposed by the celebrated Wutzer of Bonn, of substituting, in the same spot, after the Talicotian method, a portion of the transparent cornea instead of the natural and opaque membranes;—that has moreover led Feburc, and more recently Dieffenbach, to advise, and, it is stated, successfully to execute the complete excision of the central opacity of the cornea, and to unite the lips of the wound thus made by sutures;—and finally, that has led Reisinger, and more lately Dr. Biggar, of Dublin, to propose, and in the lower animals, to execute with success the removal of the opaque cornea, substituting a transparent one in its place, and so restoring useful vision. All these anxious and persevering efforts of ingenuity and skill must, we fear, be conceded to have failed; and hence the proposal before us will readily be received with a larger share of favour and consideration.

The *history* of this proposal, we believe, is as follows:—

The ophthalmologists of Vienna were not, of course, ignorant of the state of the science regarding the class of cases on which we have been dwelling, and particularly respecting the forms of simple opaque cornea, and the methods which have been proposed for remedying the distressing complaint. Meditating upon the peculiar texture and organization of the cornea, and upon that variety of the disease we have indicated above, it had long been the opinion of Professor Von Rosas, that the diseased part of the cornea might be sliced away, so leaving a clear portion beneath; and, moreover, that this operation might so be managed that the resulting increased action would not produce a new film, but leave the parts in a translucent or transparent state.

This speculation was converted into a kind of certainty, by there appearing at the Clinical School, in the year 1833, a man in whom the left eye was atrophied, and whose right exhibited a complete obscuration of the cornea, with the exception of a small portion in its centre about the size of the natural pupil, which was clear, and which served all the useful purposes of vision. Here the unaided powers of the constitution had wrought an excellent cure; and art was as it were challenged to accomplish that which nature had so well effected.

Accordingly in the Ophthalmic Clinic of the session 1833-4 Professor Rosas undertook the performance of this operation in two cases. In the former, he may have been said to have removed by far the greatest number of the layers of the cornea, and the trial was not unsatisfactory, inasmuch as the patient was quite cured of his wound, and left the hospital with very decided improvement of sight. The subsequent history of this case however, was unfortunate. It

was ultimately ascertained that after leaving Vienna, fresh inflammation attacked the eye, and the advantage which had been gained was completely lost. In the latter, the external and opaque layers of the cornea only were removed; the remaining part was found in its normal state, the healing process advanced to its close without any opacity being superinduced, and a cure was effected by means of a clear membrane. Six months afterwards it was ascertained from good medical authority, that the patient continued to see as well then as he did upon leaving the hospital. In both these cases, the greatest care was taken after the operation to regulate the re-action which necessarily followed, by the antiphlogistic regimen, and by cooling local remedies.

In subsequent years the operation was occasionally performed with mingled, rather than with marked success; but with a sufficient measure of it to encourage still farther trials.

The next event in the history of the proposal to which we have to direct attention is a case which presented itself in the Ophthalmic Clinic of Vienna in the session 1841-2, and which fell under the immediate care of Dr. Gulz. In this instance, there was a cure effected in both eyes; in the one, which was in a staphylomatous state, by nature; in the other, by the hand of the surgeon: and so far as our knowledge extends, this is the most detailed and remarkable instance of the success of the method which has hitherto occurred.

Salomon Maschkowits, Oct. 28, from Hungary, a tailor by trade, of leucophlegmatic temperament, and having about him the traces of struma, two years previously was attacked, in his native country, with purulent ophthalmia, after being in frequent and close communication with a fellow-workman labouring under the disease. For the cure of this complaint he resorted to an hospital, from which, after a treatment of eighteen weeks, he was dismissed, with no greater power of vision than that of distinguishing between light and darkness. After dismissal, as might be expected, there was no improvement, but the reverse. The left eye gradually augmented in size; the corneal portion at the same time projected more and more, and the blindness continued as bad as ever. These symptoms advanced for about a month, when, one morning upon awaking, the patient, to his great joy, observed that he could perceive objects with his left eye, though it was more than ordinarily tender and painful. From all that could be learned, and from a careful examination, it appeared that the ophthalmia had produced spherical staphyloma in this eye, which ran its usual course, getting larger and larger till at length it had burst, after which the cicatrization had finally stopped at that stage in which there was the formation of a transparent membrane, a termination not more fortunate than rare. At all events, upon his presenting himself at the Vienna Clinic, this eye was found with the remains of a genuine staphyloma, the most projecting portion of which was smooth, as if it had been shorn with a plane, also transparent and shining, to the extent of half a line;

so permitting the passage of light to such an amount that the patient could readily distinguish larger objects and colours; and clearly demonstrating that there are circumstances in which, even after the rupture of a protruded cornea, with adhesion of the iris, a clear and useful aperture might still be left.

The disease in the right eye had run a different course. The external layer of the cornea had been more or less inflamed ulcerated, and destroyed, and the healing powers of nature had operated by substituting in their place a substance, whitish and opaque, over the whole surface of the cornea. On the patient's presenting himself at the hospital, granulations were found in the palpebral conjunctivæ of both eye-lids, and the right cornea was somewhat flattened; in all its extent obscured by a cicatrix, the result of the previous ulceration, whilst at the same time, the organ readily discriminated between light and darkness. It was thought, or at all events, hoped, that the obscuration and ulceration of texture in this instance did not extend throughout the whole depth of the membrane; and the case was deemed a fair one for attempting what could be accomplished by the slicing off of the opaque portion of the cornea and leaving the transparent part as little injured as possible.

As preliminary to any thing in the shape of operation, the removal of the granular state of the palpebral conjunctivæ, with the consequent inflammation, was first essayed, and accomplished without difficulty.

The operation was performed by Dr. Gulz, under the direction of M. Von Rosas, in the following manner:—the instruments employed being the cataract knife, with a double cutting edge, of Rosas, and the pyramidal knife of Beer, together with a small toothed forceps, and a delicate pair of scissors. The eye-lids of the patient were conveniently fixed by the fingers of an assistant, and the cutting consisted in the continuous and repeated introduction of the knife, following the motion of the eye-ball through the external layers, so gradually approximating the internal parts of the cornea. The manœuvre required to be repeatedly and adroitly performed, until the transparent part of the cornea was at length reached; it was then, by the help of the different instruments, bared to the extent of a line and a half in diameter, the innermost layers of the cornea being fortunately uninjured throughout, and consequently the anterior chamber of the aqueous humour remaining unopened. The operation occupied about a quarter of an hour in its performance; and after its completion, the vision was improved to such an extent that the patient could perceive different shades of colours, and the smallest objects, such as the hands of a watch, with facility.

The subsequent treatment consisted in the application of plasters over the eye-lids, so preventing their motion; these again were covered with cold and ice-water, to moderate every thing like excess of action; the patient was placed in a dark room, and the strictest regimen was enjoined. All appeared to progress favour-

ably, and no alteration was made during the first eight days. At the end of that time the plasters were removed, and a collyrium, first of a solution of hydriodate of potash, (1 gr. to the ounce,) and subsequently of the solution of muriate of ammonia, was used.

All went on most promisingly for the first four weeks; after which the eye was attacked with ophthalmia, the result probably of cold, or some irregularity in diet. The inflammation invaded the iris as well as the cornea; and to such a degree, that the thinned cornea was pushed forward, forming a keratocele, to such an extent that the bursting of the membrane was seriously apprehended. By venesection, however, leeching, and the application of solution of alum and ice, and by the use of calomel internally, the danger was arrested and the attack subdued. In a few days the vision, to the great joy of all parties, was found uninjured; and after the additional period of five months, it continued to exhibit the same degree of perfection which was enjoyed previous to the inflammatory attack.

The patient, as may be expected, is near-sighted, requiring to hold objects near to the eye, and to place them in a good light. This is readily explicable, from the greater convexity of the cornea, the small size of the pupil, and from the fact that the new made aperture is somewhat more distant from the retina. Glasses could effect much in these circumstances; but even without them, the amount of vision is most satisfactory, and to the patient invaluable.

On examination, the white and opaque portion of the cornea near its centre is found removed, whilst the internal transparent part preserves its natural appearance. In this way, much of the old deformity is removed; so that in addition to the more substantial benefit of good sight, the general appearance of the patient is much improved.

Concerning this operation and its fortunate results, nothing is further from Dr. Gulz's mind, than the assumption of any supposed merit arising from the dexterity of its execution, or the superior wisdom with which the after treatment was conducted. That it requires considerable dexterity and steadiness of hand is undoubtedly true, and not less, great attention and care in the after treatment. The claims of the case to consideration, rest mainly perhaps on its comparative novelty and rarity, and especially on its unexpected success, whereby the utility of the art may be extended, and not a few miserable sufferers restored to comparative enjoyment and comfort.

London and Ed. M. J. of M. S. March, 1844, *p.* 199.

70.—ON THE LATERAL OPERATION OF LITHOTOMY.

By William Keith, M.D., Surgeon to the Royal Infirmary, Aberdeen, and Lecturer on Clinical Surgery in that Institution.

[In the principles which have guided Dr. Keith in performing this operation, he agrees in general with the majority of English operat-

ing surgeons. In some respects, however, he differs from them, and on these points we have endeavoured to make the following abstract of his very valuable paper. He is more than usually careful in his preparatory treatment.]

The instruments I use, and would recommend to others, are few and simple.

1. The staff is large, curved, and long in the curve, so as to enter well into the bladder, having a wide deep groove more on its lateral than on its convex aspect, but between them, the groove made to terminate abruptly, as a check, fully half an inch from the point of the instrument.

2. The knife is long in the handle, narrow and short in the blade ; and, short as it is, its cutting edge is limited to an inch and quarter from the point ; the back of the point is rounded off a little ; the heel of the blade thick, so that a very short hold can be taken of it when necessary, and its heel can do no harm when opening the urethra in the very deepest perineum.

3. The probe-pointed bistoury is very narrow, thick in the blade, and squared until it reach within an inch and quarter of the point, which is the extent of cutting edge.

4. The blunted gorget has its left edge quite rounded, the other ground to an edge, and then blunted with a file. The point well rounded into a blunt button. It is a copy from "Cheselden's Conductor," as represented in one of the plates in Heister's Surgery, see page 183.

5. The slit probe will be found useful in pushing home the loop of the ligature, when it is thought advisable to tie the transverse perineal artery in weak and elderly patients.

6. With such a sharp hook, in a case where the artery of the bulb was cut in a fat subject, that artery and the transverse perineal forming apparently in one common trunk, the perineum so deep as to prevent ligaturing, and sponge-plugs failing to restrain the hæmorrhage, the trunk was easily caught in the fold of the hook, and the bleeding effectually and permanently stopped by noosing the bend of the vessel over the point and heel of the instrument, and allowing the hook to remain in the wound until two days after, when ulceration liberated it. Were it necessary, the pudic artery might easily be hooked and secured in the same way—a screw joining, half an inch above the hook, would allow the handle to be withdrawn, and leave the vessel safe in the close embrace of the ligature and the curved portion left behind.

As to forceps, Cheselden's has never been improved upon—strong in the handles that they may not yield and thereby lose grasping power—long for large stones—the blades of all hollowed—curved towards each other at the points, but not actually meeting—rough in the hollow, but not very sharp round the edges of the blades, lest the stone be thereby cut and chipped. The straight flat blades take an insufficient hold, and their points gape so as to dilate the wound during extraction much more than that above described.

[Dr. Keith differs in some respects from our best surgeons in the mode of making the first incision. "The most common error," according to Sir Charles Bell, "is in making the incision too high—feeling for the staff." He has seen full one half of the incisions above the level of the arch of the bone and consequently useless. The effect of this is, that when the operator has grasped the stone in the forceps, it is driven out of his hold by coming against the arch of the pubes; and he cannot as he ought draw downwards because the incision is not low enough. With this difficulty in his view, Dr. Keith, in common with other British surgeons, makes his external incision as far as he can, with safety, from the symphysis pubis. He asks "And what is there to fear in going past the side of the rectum, in place of going past the side of the bulb as recommended? Nothing, taking care of the gut; there is literally nothing to cut but the *levator ani* and cellular tissue, till you reach the edge of the *gluteus maximus* muscle or the external sacro-ischiatic ligament, were it ever possibly required to cut so deep." Dr. Keith goes on to say]

The *sphincter ani* being irritated to make it contract, and the perineum put on the stretch by the expanded fingers of the left hand, the knife is entered boldly behind the swell of the bulb close to the raphé, only one inch in front of the anus, in an adult; the knife is directed downwards and outwards, so as to run midway between the anus and tuberosity of the ischium, inclining more to the latter, becoming gradually shallower; the wound terminates at or near the edge of the gluteus muscle, about two inches behind the anus,—the line of incision being straight from the point of commencement.

By this incision I have, without difficulty, removed a stone measuring nearly three inches in diameter. In truth, it makes an approach to the outlet provided by an all-wise Creator in the other sex, enables you to act with your forceps in dilating the bladder and in extracting the stone in the proper line of axis, without fatally bruising the soft parts that intervene between the rami of the pubes and the forceps, when they are entered higher up and more forward; and, finally, it gives the most dependent opening that it is possible to conceive, for the escape of the urine during the recovery; and that opening exactly in a line with the internal incision which you make into the bladder, making the whole wound one clean cut from the neck of the bladder to the edge of the hip. The majority of those who have recently written on the lateral operation of lithotomy seem disposed to recommend the first incision to be carried farther back than it formerly used to be; but, in general, they speak too indefinitely to afford any rule by which a beginner can be guided;—one orders the incision to commence an inch behind the scrotum,—but where is the line at which the scrotum terminates; another begins the incision before the bulb, cuts only integument, and, when past the bulb, enters the knife more deeply, and so on,—all advising to pass the anus a little way; but all this is enjoined in Bell's standard work, and still the line laid down is fatally

far forward, so that their united directions only encourage the young operator to practise the same. Sir Benjamin Brodie, in his lectures on the Diseases of the Urinary Organs, published in 1842, is one exception. He is very clear and specific on this point. At page 130, he begins, "I say, then, let the opening in the urethra be made deep in the perineum *behind the bulb*, and as near as can be to the prostate. Place the thumb of your left hand on the skin over the staff; and, in a man of ordinary size, about an inch and a quarter before the anus. Begin your incision immediately below this, on the left side of the raphé, and continue it backwards and towards the left side, into the space between the anus and the tuberosity of the left ischium. Here you may cut freely; you can injure nothing of consequence." He adds a little after, "All these incisions are, you will observe, made low down the perineum, that is, near to the rectum." And again, "There is also a great authority in favour of this mode of proceeding. Cheselden made his incisions in the way which I have mentioned, as is proved by the anxiety which he evinced to avoid injuring the rectum. Had he done otherwise, it would never have entered into his contemplation that the rectum was in danger."

But, says Dr. Keith, life and death, in the great majority of instances, hangs upon the right performance of the next step in the operation, which I now proceed to consider. That is,

The second incision. When the first incision has been made, as I have directed, no difficulty will be found in reaching the face of the prostate gland and membranous portion of the urethra,—the fore-finger of the left hand directed upwards and backwards, under and behind the bulb, will answer all useful purposes for dissection,—the transverse perineal muscle at its point of union, and a sufficiency of the *levator ani* have been cut, and cellular tissue only remains between the operator and the parts he has secondly to penetrate. It is worse than useless, therefore, to play with an edge tool in a deep wound where its presence is not required. The prostate reached, the staff, as it lies in the membranous portion of the urethra, has to be felt for; and here I must warn the beginner not to expect to feel the staff very distinctly:—the word membranous deceives such, and they are not at first prepared for what they will always find, viz., a thick firm substance surrounding the urethra, through which they have to cut before reaching the urethra or staff. The knife with which the operation was commenced is inserted, as close to the apex of the prostate as possible, a small slit is made sufficient to admit with ease the end of the probe-pointed bistoury,—the knife being laid aside, the narrow blade of the bistoury laid well into the groove of the staff is slipped along into the bladder; the point is then fixed in the groove, and the handle moved outwards and downwards to a moderate extent, so as to insure the *sphincter vesicæ*, prostatic urethra, and a small portion of the prostate gland being cut. (A little urine usually flows at this stage.) The gut is in no danger, as the bistoury has no cutting edge but close at the point, and that portion is at this moment wholly within the prostatic urethra and bladder.

Keeping the gut, however, out of the way with two fingers of the left hand, I usually, in withdrawing the bistoury, bring it out of the prostate, and take a sweep along the lower angle of the wound out to the very skin, so that not a fibre can afterwards interrupt either the stone, or the urine in its escape subsequently—laying down the bistoury I take up the gorget, and having lodged its round probe beak in the groove of the staff, I pass it onwards into the bladder, neither with force nor in haste, but by a firm and steady movement, guarding against the possibility of a plunge—the tearing edge directed downwards and outwards, exactly in the line of the external incision, and, consequently, being a direct continuation of the incision begun in the prostate by the bistoury. (At this stage the bladder empties itself of urine by a gush along the hollow of the gorget.) In this way the incision can, if needs be, be carried to the very verge of the prostate, without any risk of the wound extending beyond that gland, the structure of that organ, so different from the tissues composing the coats of the bladder, rendering it an easy matter to tear cleanly the former with an instrument and a force, that only dilates the latter. In this very way Cheselden entered the bladder, but his gorget or conductor, as he called it, was wholly blunt; and it was alleged that he often entered the bladder with it by simply but rapidly dilating the prostatic urethra, which of course occasioned difficulty and hindrance in getting out any but small-sized stones. This led Sir Cæsar Hawkins, at an after period, to put a cutting edge on Cheselden's conductor to insure a positive division of the prostate gland. We have authentic records to prove that, although Sir Cæsar Hawkins succeeded well with his cutting gorget, yet his success cannot compare with that of Cheselden; while in the hands of Hawkins' disciples the cutting gorget has proved so fatal a weapon as at length to have caused it to be almost banished from English surgery. I have looked in vain for any approach to the success of Cheselden since his time, until I find Mr. Martineau at the Norwich Hospital, again effecting his entry into the bladder with Cheselden's blunt gorget, and immediately recoveries multiply and deaths diminish, until an approximation to his average of mortality is made. The same success continues in the same institution, resulting from the same cause, in the hands of Martineau's successor, Mr. Dalrymple; and I do not remember a fault having been found to their practice, but that at times, as in the case of Cheselden, doubt existed whether the neck of the bladder was incised or not. Another eminent surgeon has laid the result of his experience before the profession, I mean Mr. Liston, whose success has been very great; and seeing that as yet he has not used the blunt gorget, his explicit avowal of the principles by which he has accomplished so many cures, tends powerfully to strengthen the conclusion which Cheselden's experience alone might long since have taught the whole world, —that a small incision into the bladder is sufficient in all ordinary cases for the removal of stone; and that in no case is it safe or advisable to let the second incision extend beyond the base of the

prostate; and that the success of all the most fortunate lithotomists has depended upon the narrow limit to which they restricted themselves in dividing the neck of the bladder.

With these ideas in my head, it occurred to me to use a gorget neither blunt nor sharp,—an edge on it that behoved to cut through a substance so solid as the prostate gland, yet so blunt that such a tough elastic membrane as the bladder would stretch upon its edge; and this I found of easy accomplishment. I have several times finished the whole incisions with the first knife, using no gorget when the perineum was unusually shallow, contenting myself, of course, with a very moderate incision into the prostate, and all did well; but in the great majority of the cases the neck of the bladder and prostatic urethra were slit obliquely downwards and outwards to about half an inch, and I then finished the incision, by the aid of the blunted gorget. Thus I insure a positive entrance into the bladder, obviating the chance of merely dilating the *sphincter vesicæ*, as Cheselden and Martineau are alleged to have often only done,—and thus I escape the risk of cutting parts that never should be cut in this operation. I have seen both the gorget and the knife, in old experienced hands, make a fatal wound in the fundus of the bladder; but that is next to impossible with the gorget I recommend. Take the worst kind of case that can well offer; a deep perineum, an enlarged prostate, with the veins enlarged around it, and the calculus full sized,—how unsatisfactory does the operation prove in every such case, having only scalpel, broad-bladed knife, or cutting gorget to make a sufficient entrance into the bladder with, those can best testify who have encountered such cases:—I also have—and the patients beyond 70 years of age; yet by the limited slit in the prostate, effected with ease by means of the long narrow-bladed probe-pointed bistoury, and the gradual, but safe and effectual continuous tear in the same gland by a blunted gorget, with a rather broader blade than usual, the object was easily accomplished, without even the risk of harm having been incurred.

The number and variety of modes and instruments employed by different surgeons sufficiently proves the apprehensions felt at this stage of the operation, and no doubt the hazard is very great; yet to me it seems that the danger to the patient mainly arises from the neglect of the principle I am seeking to inculcate, and that even by those lithotomists who *speak* of a small second incision. I need not dwell on the ingenious but destructive weapon, the lithotomic caché, either single or double, so patronized by the French, yet so deservedly repudiated by all English surgeons, as there is little fear of its adoption by any one here; but not so with the broad-bladed knife of Sir Benjamin Brodie—his merited eminence is too likely to commend any suggestion of his to immediate acceptance,—and, therefore, I venture to remonstrate against its use. A blade so broad when up at the urethra, where the probe point must enter, will almost touch the left ramus of the pubes as it closes in towards the symphysis, and there endanger the continuation of the pudic

artery, or, at all events, the artery of the bulb;—it is not it *may*, for I have *seen* it happen in the hands of an old and experienced surgeon. Again, the wound in the prostate will be longer than was contemplated should the assistant move the staff even but a little to one side, by altering the angle of inclination of the knife, for of course the left hand of the surgeon will be too fully occupied in keeping the rectum out of harm's way to admit of much attention being given to the staff; and, *finally*, the broad sharp blade, bellying out without a blunt shoulder as the cutting gorget even had, is exceedingly likely to wound the bladder from within, as that organ falls rapidly in on the evacuation of the urine, and must embrace the blade all round; and in the act of withdrawing such a knife the rectum is a second time in danger. I trust I may be pardoned the freedom of these strictures. There is no man in the profession I so highly respect,—no man who has so fairly stated those views on the subject of lithotomy which I only aim at corroborating; yet my higher respect for the truth compels me to warn the unwary, where he would, unintentionally, lead them wrong. All the dangers alluded to are escaped from by the use of the blunted gorget, and as free and as clear an opening into the bladder obtained as by the broad knife commented on.

But another advantage accrues from the use of the gorget,—it lies with safety in the bladder, and, the staff being withdrawn, becomes the actual conductor of Cheselden, guiding the forceps without violence safely into the bladder,—a business not easy to the most expert in a deep perineum,—or if so, then the ease has been purchased by a deep incision so free as will, in all probability, cost the patient his life. To all, therefore, the hollow of the gorget presents a fair channel along which to press the forceps till lodged in the bladder. To a beginner such a help is invaluable; only let me warn all beginners that their trust must not rest on mechanical appliances, but on a thorough knowledge of the anatomy of the parts concerned, a right apprehension of the principles that should control every step in the operation, and a calm collectedness of mind ready for any emergency. The staff is lodged in the urethra and bladder, that the operator may find a sure director into the latter when his dissection has brought him to the face of the prostate; let it, therefore, remain fixed in the mesial line, pressed against the *symphysis pubis* during the whole operation, and then he knows where to find it, just where by nature the urethra runs. The advice given by some writers, to make the assistant meet the knife by pressing the convexity of the staff against the left side of the perineum, is, to say the least of it, injudicious; it occasions a risk of the point of the staff escaping from the bladder; it alters the natural position of parts, and limits the space into which the operator has to cut, pushing his incision towards the ramus of the ischium, under the edge of which the pudic artery runs, the nearer to which that the lesser arteries are cut the more energetically will they bleed; and, *lastly*, the parts are thereby

so pressed down upon the rectum as to endanger it at the very first cut.

Then, again, the blunt gorget is supplied, not as a substitute for anatomical knowledge, but as an instrument capable of opening the neck of the bladder just as far as safety admits, (that is, as far as the prostate gland extends,) and quite as far as sound principle requires, seeing that the elasticity of the coats of the bladder is sufficient to allow of the easy escape of any fair average sized stone, after that gland and the sphincter of the bladder have been divided. Surely much need not be said to satisfy any surgeon that one is quite safe to draw upon the elasticity of the coats of the *living* bladder to allow of the escape of a large stone through a comparatively small opening; the prostate might be injured and shattered by great dilatation; no elastic quality resides in it; but it is essential to the very function of the bladder that it shall dilate and contract,—at one time reduced to the size of an egg, and in six hours expanded to the size of a human head—and again, in half a minute, by the power of the will, down to two and a half inches in diameter. What difficulty can there be in obtaining for a minute or two the expansion of a small wound in such a membrane, freed of the girding effect of an uncut prostate, to allow of the escape of even a large foreign body, forcibly withdrawn in the grasp of a forceps, whose blades, smooth on the back, come out possessed of all the powers of the wedge; and why, then, incur the fatal risk by extending the incision beyond the base of the prostate, of laying open the pelvis to the ingress of urine, by wounding the ileo-vesical fascia, when you not only have this elasticity in the coats of the bladder to draw upon, but actually do draw upon in every case where the stone reaches an average size, one and three-quarters, by one, and by one and a quarter inches in diameter? Enclose such a stone in the blades of a forceps and then say if a lineal wound of even three inches long will admit of its exit without considerable expansion—and who among the advocates for free incision is prepared for such cutting, all to give transit to a foreign body occupying half a minute in its progress, and the opening then having to be healed up? I would only add before closing this section, that much fallacy has been introduced into this question by parties experimenting on the dead body, and then applying their conclusions to the living,—forgetful all the time that the power of a living muscle, whether in resisting or sustaining, is to a dead muscle as 1000 to 1,—in truth they can form no fit subject of comparison.

Trusting, as I do, so much to the dilatability of the coats of the bladder for affording a safe exit to the stone, it will at once be seen that some caution is required in its extraction, and I come, therefore, in the sixth place, to say a few words on that subject. It has often struck me on witnessing lithotomy, that there was little or no system or fixed principle ruling the surgeon in this stage of the operation. When searching for the stone, it seemed only a succession of ineffective glamps with the forceps. When extracting —a succession of violent pulls, equally ineffectual for the attain-

ment of the end desired. With the closed forceps let the stone be searched for—felt; let the closed blades on their flat sides be pressed down on one side of the calculus to below its convexity, then fixing the lower blade in that position, with reference to the stone, let the handle of the upper blade drop, if need be, pressed down, until the blade is raised quite above the level of the stone, when it only requires a semi-rotation of the instrument, the lower blade still occupying the fixed point, and the stone is at once enclosed in its embrace. This for stones of average size and upwards; small stones may lodge, where the prostate gland is large, in the hollow behind it, or where the person is pot-bellied, it may be shelved above the *symphysis pubis;* in either case the stone may be easily found by a forceps slightly curved. Where too much water has been in the bladder at the time of operation, the circular fibres may contract, and enclose the stone in the very fundus of the bladder. This difficulty is to be detected and overcome by the steady progress of a straight moderate-sized forceps, onwards till it reach the stone. I have seen the forceps go to a great depth in such a case, and nothing wrong but this longitudinal elongation I speak of.

The stone fitly seized in the smallest diameter, the dilatation of the wound begins in earnest, by a firm but steady downward extracting power, gently moving the handles from side to side, a little upwards and a goodway downwards, from time to time allowing intervals of rest to the parts, and to the operator's own hand, but never for a moment relaxing the grasp of the stone itself. It is annoying to have to witness the necessity of going again and again to poke about the bladder, the stone having been once fairly and firmly caught. Having rested, the power must be again applied, coolly, calmly, firmly bearing down, exactly as an accoucheur does when delivering a fœtal head with the forceps. Proceeding thus a very few minutes suffice to complete the delivery; the stretched fibres speedily retract, and a comparatively small wound only remains to be healed, and that entirely surrounded and supported by the prostate gland, which must favour its closing up.

I will not deny that the operation I advocate does endanger the rectum; but I must say, with ordinary care injury to it is not likely to happen. The first incision only requires depth at its upper angle, for about one-third of its length, the remaining two-thirds ought to shallow rapidly, requiring little more than the integument to be cut, as the tissues beneath are elastic in a high degree, and yield readily during the extraction of the stone. I am quite convinced that the rami of the pubes have most commonly been the cause of the many desperate struggles we have heard of and seen in the extraction of calculi. There seems to be an unusual fear in the minds of some surgeons at the idea of wounding the rectum, with which I cannot sympathize. How often do we all cut it up, one, two or three inches for the cure of *fistula in ano*, and far from harm happening, it turns out one of the most successful and satisfactory of surgical operations. Once, in extracting a large angular fragment

of a stone which had fractured in the grasp of the forceps, a small wound was made in the side of the gut, and twice a nitch was made with the knife. In the first instance, before closing the operation, I divided the *sphincter ani* as if for fistula, cutting through from the nearest point at the upper angle of the wound. By this proceeding, I left so little tissue to close in upon the urethra, that it gave me much after annoyance, and taught me what I earnestly recommend to others, to cut the sphincter through at the lowest point of the anus, and then push the lateral flap up into the gut to cover in the membranous portion of the urethra. The result will prove quite satisfactory. The above case strongly illustrated to me the ground of objection to the recto-vesical operation—an operation which, I am certain, might be practised with great safety to life, could the suggestion I have offered with equal certainty ensure after comfort. But again, I would say, the question is needless if the low lateral incision is adopted.

As I have before said, fatal infiltration of urine arises in every instance from the deep incision extending beyond the base of the prostate gland, and penetrating the fascia that passes from the sides of the pelvis on to the bladder at the boundary line of the gland. Once past this defence, and the urine comes in contact with the peritoneum—the necessary consequence of which is death—less from pure peritoneal inflammation, judging from all the cases I have seen, than from the poisonous absorption of urine.

Dr. Keith ends this excellent paper by summing up as follows :—The patient should be previously brought into the best possible state of health. Tongue clean, and urine as nearly natural as may be. The nates clean shaved—a dose of castor oil administered on the evening prior to the day of operation—an enema on the morning of that day—and only the accumulation of thirty minutes' secretion of urine in the bladder—prepare the patient for the operating table.

A large curved staff, with a deep groove on its right lateral aspect, is then to be introduced into the bladder and the stone felt. The feet and hands to be then firmly secured to each other. The nates brought just over the edge of a table, thirty inches high. The knees steadied by two assistants, but not tied by a tape passing over the nape of the neck. The staff held by the third and chief assistant, from the commencement to the close, firmly in the centre line of the perineum, fixedly against the *symphysis pubis*, and fairly into the bladder, care being taken that no movement of the patient, and no dropping of the assistant's hand, shall occasion its withdrawal from that viscus until an entry has been effected. The external incision to commence at the raphé one inch anterior to the anus, to pass outwards and backwards midway between the anus and *tuber ischii* to the extent of three inches or more from the point of commencement, according to the probable size of the calculus, previously ascertained. The wound deep at its upper angle, only to be carried on with the finger, almost unaided by the knife, fairly below, and then in behind

the bulb of the urethra, until the face of the prostate gland and membranous portion of the urethra are felt; the knife is made to enter the groove of the staff in the latter, and just notch the apex of the gland; this opening is enlarged, continued onwards to the bladder, the *sphincter vesicæ* and prostatic urethra cut in a direction outwards and downwards, by means of the narrow-bladed probe-pointed bistoury. The blunted gorget carries this incision to the very base of the prostate, if that should be required. The forceps, easily and safely introduced along the hollow of the gorget, is then made to embrace the stone, as formerly directed, and becomes a safe and efficient dilator of the coats of the bladder during the extraction of the stone. There are few operations to which the adage, *Festina lente*, does not apply. To lithotomy it is especially suitable, and to this stage of it peculiarly applicable. The words "make haste slowly" should be ringing constantly in the surgeon's ear.

Ed. Med. and S. J., April, 1844, *p.* 396.

71.—ANEURISM TREATED BY COMPRESSION.

By R. Liston, Esq., Surgeon to University College Hospital, &c. &c.

[Another interesting case of this description has been treated by Mr. Liston. In November, 1843, the patient moved rather a heavy cask, and in so doing exerted himself much, and he thought that he then injured his leg, for immediately afterwards he began to experience pain in the part; about a fortnight afterwards he observed that a swelling, about the size of a walnut, had formed upon the lower and inner part of the thigh; this slowly increased in size, and after the lapse of two or three weeks he noticed a pulsation in it. It then rapidly increased in size, and pulsated strongly; a rough murmur with each pulse was also heard over its site, on the application of the stethoscope.]

The instrument for compressing the artery was placed upon the upper part of the thigh, but from the conical form of the pad considerable difficulty was experienced in maintaining pressure upon the vessel. To have at night half a grain of hydrochlorate of morphia; middle diet, and a pint of milk.

Jan. 21. Hydrochlorate of morphia, three-quarters of a grain, at night.

22. The pressure of the instrument has caused considerable excoriation of the upper and inner part of the thigh; it has also occasioned severe pain. The artery appears to have escaped from the compression, as a loud *bruit* (which had ceased after the first application of the instrument) is again audible. The instrument has been again adjusted, and placed over the artery nearer the upper part of the thigh. The size of the tumour has diminished much. Repeat the hydrochl. morphia, h. s.

23. The pressure of the instrument has been productive of so much

pain that its use must be again given up until the pad can be altered. Repeat the morphia.

29. The tumour appears to have become more circumscribed; he suffers much less pain in the leg than formerly; superficial sloughs have formed on those parts upon which the chief pressure of the instrument was exerted.

Feb. 1. The slough has separated from the inner wound not from the outer; the tumour is very hard; there is a slight pulsation, and the *bruit* much less distinct than formerly. The tumour measures sixteen inches at its greatest circumference.

20. The pain has gradually got less, and there is but little at present; the tumour is rather smaller, and appears more flattened. A leather splint was applied to the outer side of the limb (a hole being cut in it to allow of the dressing of the ulcer) to prevent the effect of the pressure of the external pad of the instrument, and a pad of soap-plaster, spread on soft thick leather, placed over the artery, to protect the superjacent integuments before reapplying the instrument. Even when the pressure was on, the *bruit* was with difficulty made to disappear. The leg was bandaged from the feet upwards, and a pad of lint placed over the aneurism as a compress.

21. Tumour smaller, measures fifteen inches; *bruit* less distinct; arteries are felt pulsating at two or three parts of the thigh, one especially along the outer border of the anterior surface; less œdema of the integuments; ulcers healing rapidly.

24. Last night he had very severe scorching pain in the tumour, which was rather larger, and between it and the knee the bandage was altered, and hydrochl. of morphia, gr. i., ordered.

28. Has been almost free from pain, but cannot sleep; the tumour is rather smaller; no *bruit* nor pulsation.

March 4. No more severe pain; inner ulcer healed; the tumour measured this morning fifteen inches and a half; murmur still heard, but no pulsation felt either in it or in the course of the artery between the aneurism and the seat of the pressure.

11. No murmur; tumour measures about fourteen inches and a half; it appears flatter, and as if constricted at its lower part, giving rise to a slight separation into two swellings; the instep is tender, and the integuments over the upper part of the tibia were red and tender to the extent of two or three inches. The ulcer on the outer side, which is just below the root of the great trochanter, does not heal rapidly. Dress it with red wash.

12. This day the splint and *presse artère* were removed, but the leg bandaged from the toes, and a compress over the aneurism; there was slight œdema of the inner part of the thigh and leg; feet warm; sensation tolerably perfect.

14. Ulcer healing; tumour about a line smaller.

In all respects the case promises very favourably. The results will be reported when the condition of the patient affords the opportunity of publishing further details.

Lancet, March 23, 1844, *p.* 24.

72.—ON ANEURISM OF THE EXTERNAL ILIAC ARTERY.

By Richard Hey, Esq., Surgeon to the County Hospital, York.

[We need not detail the history of this case. It will be sufficient to state that it commenced as a small hard tumour, immediately above Poupart's ligament, midway between the anterior superior spinous process of the ilium and the tuber of the ischium, and gradually increased in size, with evident pulsation. In about eight or ten days the tumour had become conical, like the pointing of a large abscess, and the skin was thinner, red, and shining. It was now decided, in consultation with Mr. William Hey, of Leeds, to take up the common iliac artery.]

It seemed out of the question to attempt tying the external iliac, because from the very large size and extent of the sac, it was evident that there would not be room for a ligature between that and the bifurcation of the external and internal iliacs ; and in addition to this, the probable state of that artery made it unwise to run such a risk, even if it had been practicable.

There were present at the operation Messrs. Nelson and Ellis, Mr. William Hey, and Mr. Teale, of Leeds ; Mr. Dodsworth and Mr. Reed, of York ; to whose kind and very able assistance I feel deeply indebted.

The tumour now occupied the whole of the left iliac fossa, its base projecting considerably below Poupart's ligament inferiorly, and superiorly extending to within less than an inch and a half from the navel, being six inches across from above to below, and six inches and a half from side to side ; projecting also from the plane of the abdomen fully three inches.

The patient was placed on his back on a mattress, his shoulders moderately raised. The incision was commenced two inches and three-quarters above the navel, and exactly three inches to the left of the median line. This was carried down moderately curved to the base of the tumour about six inches, and was afterwards enlarged by an angular continuation, one inch and a half in length. The fibres of the external and internal oblique muscles and transversalis being successively divided, the transversalis fascia was readily raised by means of a director, and carefully opened out through the whole length of the incision. The peritoneum now protruded in some measure ; it was, however, kept down without much difficulty ; and being gently drawn towards the opposite side, I was enabled slowly to insinuate my fingers behind the peritoneum, gradually separating it from its cellular attachment to the parts beneath. The common iliac artery was easily reached, and upon compressing it with the fingers, the pulsation in the tumour ceased at once. A little time was occupied in scratching through the sheath of the artery with the point of the aneurism needle ; this being accomplished, the needle was passed under the artery from within outwards, armed with a double ligature of staymaker's silk, waxed. By holding aside the

peritoneum and viscera, we now obtained for a moment a view of the artery, and ascertained that nothing else was included in the ligature; this being tied with the fingers close down upon the artery, all pulsation in the sac entirely ceased, and never afterwards returned in the slightest degree. The exact position of the ligature was, I believe, an inch below the bifurcation of the common iliacs. The wound was closed with six sutures and strips of adhesive plaster; and over the whole a coating of lint dipped in strong mucilage. Time, twenty-five minutes. The patient was now a good deal exhausted, although so little blood had been lost that it had not been necessary to take up a single bleeding vessel; he vomited also some brandy and water which had been given to him during the operation. He took, however, a cup of boiled milk, which was retained.

Evening.—Patient had been very restless and uneasy after the operation for some hours. A camphor draught, with 25 drops of Battley's sedative, had had the effect of composing him. There was now moderate reaction, pulse 90. The wound continued still very uneasy.

Monday, December 4, 9½ a.m.—Has passed a tolerable night, having had sleep at intervals without any further opiate. Pulse, 95, rather irritable; bowels not moved, but distended with flatus; hiccup; no pain. Two grains and a half of calomel, and a quarter of a grain of opium, to be taken immediately, and in two hours time half an ounce of castor oil in peppermint water. Farinaceous diet.

7½ p.m.—Patient looking very ill; countenance anxious and sunken. No action of the bowels; a second dose of the oil had been rejected; hiccup increased; body very tympanitic and uneasy. The bandage round the body was slackened, with some relief. Great thirst, and difficulty in making water. Pulse 98. An enema consisting of gruel, with two scruples of gum assafœtida, immediately; small doses of liquor ammoniæ acetatis, occasionally.

Tuesday, December 5, 10 a.m.—Had intervals of light but refreshing sleep during the night. Enema had produced one good evacuation with much relief. No tenderness on pressing the abdomen; pulse 98. Patient upon the whole in a satisfactory state.

Vespere.—Not quite so well; rather more feverish; pulse had risen during the day to 104, now 100, and not so soft; tongue dry. No evacuation from the bowels; urine high coloured. Restless.

Calomel, 1 grain. Compound ipecacuanha powder, 2 grains.

To be taken every three hours, with an effervescing saline draught. A common enema in the morning.

Wednesday, December 6, 9½ a.m.—Had passed a tranquil night; refreshing sleep. Enema had acted well; body soft and flaccid; pulse 89, soft. Dressed the wound, which showed a great disposition to heal; discharge very moderate. Omit the calomel; continue the saline draughts and farinaceous diet.

December 7. Nothing material; all going on well; pulse 80. Bowels moved three or four times yesterday. Patient allowed some

beef tea and arrow-root, mixed. During the last day or two the tumour had looked very threatening and ready to suppurate.

December 8. Dressed the wound, which upon the whole was going on well.

A remarkable feature in this case was the extreme and unusual rapidity of its progress, after its first commencement, only three weeks having elapsed from its first appearance of the size of a hazel nut, before it had attained the formidable size which has been described.

[The foregoing important case is, we believe, the only instance in which the common iliac artery has been successfully tied *for aneurism* in this country; and we beg to draw attention especially to the situation of the incision. This is a point of great consequence, as in the case before us the operator was relieved from all chance of embarrassment from the chord, &c., a source of trouble which has been complained of by some who have performed this operation. It may also be observed, that in any case in which it might be necessary or advisable to take the chance of tying the aorta, this mode of doing it will be found in every respect far more safe and facile than that adopted by Sir Astley Cooper.—*Ed. Prov. J.*]

Prov. Med. J., May. 1, 1844, *p.* 59.

73.—ON THE TREATMENT OF LATERAL CURVATURES OF THE SPINE.

By Marshall Hall, M.D., F.R.S., &c.

The various plans which have been hitherto proposed for the treatment of spinal curvature have consisted, for the most part, in the administration of,

1. *Posture.*
2. *Stretching.*
3. *Pressure.*
4. *Stays.*
5. *Rubbing.*
6. *Exercises.*

That each of these means of cure may possess a certain efficacy, and that all, combined in a well-arranged plan, may especially do so, I am quite ready to admit. But I am also of opinion that each has been attended by its injurious consequences.

I have known the recumbent posture continued for months, and even years, until the dorsal and lumbar muscles have, in spite of the exercises conjoined with it, become perfectly emaciated, and totally incapable of performing their office of supporting the spinal column in the erect position.

I have seen the spine, straightened by means of the recumbent posture, by stretching, and by pressure made on the projecting parts, retain its form during the continuance of the horizontal position, but gradually yield and *fall* into its former curvature on the

resumption of the erect position. It is plain that these three modes of treatment can have no permanent effect unless, indeed, the form assumed under their influence be confirmed, as it were, by the deposit of solid bony matter during *growth*.

The same observations may be made in regard to the stays hitherto devised, which not only frequently induce injurious pressure, but especially exert an injurious effect upon the shoulders, raising them inordinately, and on the points made the "*points d'appui*," particularly in the very young and growing subject.

Of mere rubbing little can be said, it can accomplish nothing.

The most useful remedy in general use is the system of *exercises* adopted in the treatment of curvature. But these exercises are, generally speaking, too violent, and rather fatigue than nourish and strengthen the muscles which are so frequently atrophied in this disease.

The plans for the treatment of curvature of the spine which I propose have three several objects in view :—

The first is the restoration of the natural form.

The second, the re-nutrition of the weak and emaciated muscles.

The third, the restoration of the health and vigour of the general system.

I propose to accomplish my first object by supports applied to the curvatured form, so constructed as to give the most perfect support without inducing the least injurious pressure, either on parts too protuberant, or on others, as the axilla or the ilium, taken as points of support.

Let the patient be artificially made to assume the straight or perfect form by means of posture, stretching, and pressure ; under these circumstances, carefully preserved, let a cast of the bust be taken in plaster of Paris ; from this cast let a mould in wax be taken ; lastly, on this mould let stays of steel be accurately fitted (or let copper be deposited by means of the electrotype and sawn in two vertically). This is to be covered and lined with soft leather and slight wadding, and fixed and worn in the ordinary manner, drawn to the proper degree of tightness.

It is obvious that these stays being put on and fastened in the recumbent posture, the bust *must* retain the perfect form, although the patient may now resume the erect position ; that no partial or injurious pressure will be made on any part ; and that there is neither any constrained position nor any obstacle to the due use of the muscles.

Such a stay may be always worn, even by the incurable ; but to the curable it affords the opportunity of assuming the erect position and of adopting the most appropriate exercises, even in the open air, not only without injury, but with every benefit which can accrue from them. The length of these stays must be such as not to interfere with movements of the arms. The crutches, as they are very properly termed, of the ordinary surgical stays have this injurious effect ; and whilst they merely raise the shoulders unduly

and awkwardly, they allow the spine to sink down between them and resume its curvature. On each point tending to project efficient pressure is made, whilst to the yielding portions of the spinal column efficient support is given. This pressure and support are gentle, diffused, and the stay being perfectly *symmetrical* with the bust, perfectly equable. No injurious pressure is made on the bones of the pelvis, preventing their just development. No violent pressure is made on any part. There is, in a word, *no* pressure from without. The pressure which does take place is that induced by the assumption of curvature, of which the support proposed becomes the immediate preventive or corrective.

The support afforded by this stay, whilst it is thus equable, will also be most efficient. The patient is constrained to assume and to retain her most perfect form, whilst the limbs are free to perform every kind of motion, to go through every kind of exercise, and the patient breathes the free and open air.

It is useless to pursue this subject. The observations which I should make will naturally occur to all ; I will, therefore, pass on to another topic.

It has been stated that *rubbing* is a measure adopted in the treatment of curvature of the spine. But friction alone can do little. It may reduce the swelling or pain produced by chronic inflammation or rheumatism ; but it can accomplish little in cases of atrophy or defective nutrition, and such is the state of things in the muscles passing along the convex parts of spinal curvature.

In order to accomplish the restoration of nutrition in these atrophied muscles something more must be done ; and this remark leads me to a second proposition for the treatment of these distressing cases. It is that of inducing, by means of rubbing, what I will designate *counter-muscular effort.*

If, when the patient is sitting perfectly erect and unsupported, we press on any given point along the spine, with the finger, every muscle situated *below* the point of pressure is necessarily called into a state of action, which (action and reaction being equal, but in contrary directions) is, in degree, commensurate with that pressure, unless, indeed, the patient *yields* to the pressure. In this manner, any one of the numerous muscles situated on either side the spinal column may be called into action *at will*, and this by means of the very friction which was formerly used in a form that may be termed *inert*, and in a degree proportionate to the *pressure* with which it is applied.

The patient being placed unsupported in the erect position, the hand or hands are to be passed along the muscles of the spine, pressing, at first, very moderately, then more and more firmly, whilst they are carried upwards and downwards alternately, in the ordinary manner of rubbers. At every successive instant a fresh set of muscles is called into action more particularly, whilst the whole system of the spinal muscles is made to contract together, or in their turn.

COLLEGE OF PHYSICIANS LIBRARY.

But the very muscles which are most atrophied and enfeebled are brought into action by the simple manœuvre of applying the pressure and rubbing immediately *above* them respectively. In this manner their nourishment is brought, in a certain degree, under our control, and the spinal column is held straight and erect by augmenting the power of its natural and living supporters.

By the stays already described the morbid extension is removed from the enfeebled, atrophied, and stretched muscles. By the friction and the counter-effort of these muscles they are nourished and strengthened. By both these means they are rendered efficient in their office of supporters and movers of the spinal column and the head.

These stays must, as I have already stated, be so prepared as to be compatible with the exercises of the general form, which call into action the muscles seated along the spine. They may also be so contrived as to expose an open space at the particular part along which the proposed rubbing, with counter-muscular effort, may be applied.

With both these objects in view I beg particularly to recommend the study of the beautiful work of the late Dr. Barclay, on Muscular Motion. It is replete with observations which assume the character of most useful suggestions to those who are engaged in the treatment of lateral curvature of the spinal column.

As to the kinds of exercise, none of the ropes and pulleys devised to be employed *within-doors* can be of any value. The hoop, the skipping-rope, &c., used daily and properly in the *free open air*, or whilst inhaling the *sea-breezes*, are the only exercises worthy of consideration. The hoop should be bowled with the left hand, and the left handle of the skipping-rope should be weighted. But these are particulars upon which I need not enter on the present occasion. I may, however, suggest the propriety of a seminary or establishment, on some healthy sea-coast, for young ladies of delicate health and impaired form, as worthy of the consideration of persons properly qualified for such an undertaking.

Lancet, *Feb.* 3, 1844, *p.* 604.

[Dr. Little in his admirable lectures "on the deformities of the frame," published in the Lancet, gives us the following remarks on the treatment of lateral curvature.]

The indications of treatment of lateral spinal curvature may be arranged under three heads; the first in importance consists in endeavouring to remove the primary cause of the deformity—debility, by improving the constitutional powers of the individual; in the second rank may be placed the application of mechanical means adapted to prevent the increase and to remove existing deformity; and the third indication consists in application of means to act dynamically on the spinal column, such as certain exercises.

It is unnecessary to devote much time to description of the measures calculated to improve the general health. As medical practi-

tioners and students you will anticipate my remarks on this matter. Food, in proper quantity and quality, good air, moderate bodily exercise, the exhibition of steel, iodine, vegetable tonics, and laxatives, according to the peculiarities of individual cases. In very severe cases occurring at the period of life when the general growth should be most rapid, particularly if very great debility be present, you may for a time forbid exercise altogether. In these cases the patient should have the benefit of carriage exercise, or in the summer season be permitted to recline in the open air during a large portion of the twenty-four hours. Entire suspension of corporeal exercise is highly prejudicial to persons in vigorous health, and has consequently been commonly considered equally inexpedient to persons debilitated, as in severe spinal curvature. The cases of persons in health and debility widely differ. The debilitated individual possesses little vigour to expend ; if this be exhausted in corporeal exercise, none will remain for due performance of the vegetative functions of the system. You will often be surprised to observe that a person extremely weak, labouring under spinal curvature, who has long struggled to improve her health by exercise and nutritive diet, continues daily to get worse, until entirely confined to the couch, after which a manifest improvement in every function ensues. Do not mistake the import of the advice I now offer you. Use entire repose in these instances during a limited period as a means of improving the general health. It may be advantageous as a means of fulfilling the second indication, which I shall presently consider. Do not imagine that I recommend a confinement of months and years to the recumbent position as a means of curing spinal curvature.

The means of fulfilling the second indication (the application of mechanical means adapted to prevent increase and remove existing deformity) will be more intelligible if you reflect on the physical condition of the spine. You perceive a weak column unable, through want of firmness and tone, to support itself in the erect position, daily yielding from the perpendicular line through the combined influence of gravity and unequal muscular traction. You further observe, when the curvature is not of long standing, that the column is straightened on the assumption of the recumbent position. Is it not proper, under these circumstances, greatly to abridge the period during which the erect posture is attempted to be maintained, and thus be content to follow the course pursued by every nurse or parent who perceives a child's spine to bend beneath the superincumbent weight. Undoubtedly the most certain plan would be to confine the patient during the whole of the remaining years of growth, with the hope that if the column remained straight, or nearly so, at the period of completion of growth, it would not subsequently yield. This is an important part of the plan adopted by a gentleman now deceased, whose zeal in behalf of humanity and science is proved by the legacy of a large sum of money for the treatment of sufferers from spinal disease. Dr. Harrison, to whom I allude, attributed too much, in my opinion, to the adjuvant means contained in his "*sys-*

tem" and too little to the influence of mere repose. I shall sufficiently discountenance absolute repose during long periods, as one of the means of curing lateral curvatures, when I state that, in Dr. Harrison's hands, seven years did not always suffice for the attainment of his object, and that when persevered in during a much shorter period the wasting of the muscular system generally is so considerable that fears may reasonably be entertained that recovery therefrom may never be effected. According to the urgency of the case you may, however, have recourse to recumbency during four or six hours daily, divided into two or three portions.

Other mechanical means of partially or completely effecting the restoration exist. It is important to relieve the column of as large a portion of the superincumbent weight as possible. Numerous spinal supports and corsets, invented by their manufacturers with the specific property of curing lateral spinal deformity, have, at all periods, been brought under the notice of the profession. Some of these inventions, on the contrary, enjoy a dishonourable privacy, their nature, if not their merits, being carefully concealed. The greater number of them answer, in some degree, the purpose of supporting the spine, being applied whilst in the recumbent posture ; they resemble a cuirass, against which the tottering or inclined spine finds a resting point. They are not curative, and rarely prevent increase of deformity. Springs similar to a hernia truss are often applied, through the intervention of the ribs, to the projecting parts of the column, but their utility does not equal the ingenuity of their application. Tavernier's lever belt, which I have for some time past employed with some modifications, approaches more nearly to a scientific apparatus for cure of lateral curvature than any other I have examined.

Tavernier's lever belt consists of a band to encircle the pelvis, and should be made of light metal and furnished with semi-circular pieces to rest on the ilia. Attached to this pelvic band is a long steel lever, the angle of which may be arranged by means of a screw. This lever is directed towards the depressed shoulder (usually the left), and is intended for the attachment of a broad belt, which, taking its origin in front, at the pelvic band, opposite the left ilium (in the ordinary curvature to the right side), passes upwards across the abdomen around the prominent right side of the thorax. Part of the weight of the head and shoulders is removed by means of the crutches. The mode of operation of this apparatus in *rectifying* the position of the spinal column is simple. The pelvis affords a fixed point, so that the traction exercised upon the upper extremity of the lever by means of the laced belt, acts powerfully and continuously, during all the movements of the frame, in compressing the ribs of the right side, and through their intervention, propels the lapsed dorsal vertebræ into the perpendicular position. The restoration is facilitated by the weight of the upper extremities being partially removed. This apparatus possesses the advantage of not subjecting the thorax to any circular compression ; the wasted left

side of the thorax is perfectly free, and one of the earliest signs of improvement consequent on the use of the apparatus is an evident enlargement of the capacity of this side. The relief experienced is so great that patients spontaneously remark the diminished fatigue with which they take exercise, the greater freedom with which they respire. I have witnessed no instances in which the health of the patient has not, at the same time, improved. It is unnecessary to remark that, in the use of this apparatus, as in that of all mechanical contrivances for the relief of deformities, as much will depend upon the manner of application as upon the apparatus itself. Do not hastily attempt too much, but gradually accustom your patient to its use. It is well to remember the maxim, *arte non vi*, in this as in other deformities. Benefit may also be derived by causing a shoe, with raised heel, to be worn on the side on which the ilium is depressed. It counteracts the habitual sinking of the side through the improper attitude instinctively assumed. It rectifies the position of the pelvis, and compels the spinal column to attempt, as it were, its own restoration.

Modifications, frictions, suitable exercises, modified calisthenics, as they are termed, by which the muscles of the upper part of the frame, particularly those of the left side, may be excited to activity and strengthened, serve to fulfil the third indication. It is necessary, however, to guard against too great exertion or fatigue. By judicious application of the principles I have laid down, and by availing yourselves of the practical hints I have given you, you may, in the majority of spinal lateral curvatures, of not more than three or four years' duration, succeed in re-establishing the straight line of the spinal column. It is more difficult to remove the deformity of the ribs ; those on the right side of the thorax are absolutely larger than those of the left, which have been imperfectly developed, through the distortion having so long existed during the growth of the body. They are not only larger but altered in form, and no means exist by which they can be wholly restored. This circumstance, is of little moment, beyond the traces presented of former spinal distortion, as proper arrangement of female dress and the skill of the corset-maker may conceal it. The principal object, *straightening of the spinal column*, being obtained, relapse of the form of the trunk, and the secondary evils of spinal curvature formerly enumerated, need not be apprehended.

Lancet, March 16, 1844, *p.* 812.

[Mr. Stafford has published an essay on diseases of the spine, in which he points out some very ingenious contrivances to counteract lateral curvature.]

The means which Mr. Stafford employs to counteract the lateral curvature, in addition to various other simple exercises intended to obviate each particular source of distortion, consist of two exercising machines, one for bringing the muscles of the weaker side into employment, and the other for straightening the spine by gravita-

tion. The former consists of a semicircular machine, made of wood, and exactly resembling the bottom of a rocking-horse. To each end of the machine the ends of a rope are attached, which passes over two pulleys, fixed in the ceiling ; the patient stands upon this machine, taking hold of the rope by each hand, and rocking herself from side to side.

The other machine, which Mr. Stafford terms the *spine elongator*, "consists of a stand, from which arises perpendicularly an upright. This upright divides in the centre ; consequently it is made of two parts, an upper and a lower part; the upper can be wound up as high as you please from the lower part, by a winder contained in the latter. The upper part has attached to it arms to receive the axillæ, straps to cross round the body, a strap to receive the head and chin, and a bar going across the top, from which a rope hangs on each side, with handles attached to it to allow the patient to relieve herself when tired during the suspension."

When the patient is placed in this machine, the upper part is raised till the feet are just taken from the ground, and the spine is elongated and straightened by the weight of the body. Sometimes bags of shot may be suspended to the hips, in order to add to the weight.

In the treatment of stooping, Mr. Stafford recommends a weight to be suspended from the shoulders in the same manner as a drum is carried. He observes that the person who carries the great drum is invariably the straightest man in a regiment of soldiers. Another very good exercise, he says, would be to make the patient play the cymbals ; he would thus be forced to extend his arms in the air, and look upwards, by which the head and trunk would be thrown backwards, whilst the muscles at the shoulders would be in constant action. To show the utility of this exercise, he refers to the two blacks who used to play this instrument at the Rotunda in Vauxhall ; it would be almost impossible to point out two men who carry themselves so uprightly.

Prov. Med. Journal, March 16, 1844, *p.* 476.

74.—ON THE TREATMENT REQUIRED AFTER THE SPONTANEOUS INTRODUCTION OF AIR INTO THE VEINS.

By John E. Erichsen, Esq., London.

[The possibility of the introduction of air into the veins during surgical operations is now generally acknowledged, as well as the situations in which only it can happen accurately pointed out. Mr. Erichsen in this interesting paper confines his remarks to the *spontaneous* introduction of air into the system, that is to say, when it is not purposely injected into the heart, but when it gains admittance into that organ either in consequence of one of the large veins in its vicinity being opened at a point where the flux and reflux of the blood are naturally observed, or, during operations, under such cir-

cumstances, whether of disease of the coats of the vessel, of traction in the removal of tumours, or of contraction of surrounding muscles, that it forms an unyielding, uncollapsing tube, into which the air is apt to be sucked in order to supply the vacuum, which the action of inspiration has a tendency to occasion within the thorax.

Mr. Erichsen before giving his own views of the cause of death in these cases, sums up those of previous writers on the subject, which he arranges in four classes, viz. :

1*st*. That death ensues from over-distension of the right cavities of the heart. Of this opinion are Nysten, Dupuytren, Cormack, Amussat, and Bouillaud (partly.)

2*d*. That death ensues from the irritation occasioned by the passage of the air through the vessels of the brain.—Bichat.

3*d*. That the heart's action is arrested in consequence of the deleterious influence of the carbonic acid which is eliminated from the venous blood.—Marchal de Calvi.

4*th*. That the circulation is arrested in the lungs, either, as Piedagnel and Leroy have supposed, in consequence of these organs becoming emphysematous, or, as Bouillaud and Mercier, (partly) think from obstruction of their capillaries, or, as the reviewer in Dr. Forbes's Journal is of opinion, in consequence of the respiratory changes being interfered with.

After very ingeniously commenting on these different views he states his own opinion to be

1*st*. That the primary arrest of the circulation takes place in the capillaries of the lungs, or in the terminal branches of the pulmonary artery, in consequence of inability in the right ventricle to overcome the mechanical obstacle presented by air-bubbles in the vessels of those organs.

2*d*. That respiration and animal life cease in consequence of a deficient supply of arterial blood to the central organs of the nervous system.

Mr. Erichsen then proceeds to that part of the subject which is the most interesting to the practitioner, namely, the plan of treatment to be adopted.]

And first of all, as most important, let us take into consideration the best way of preventing the occurrence of the accident in question. Before doing so, however, it may be better, in order to understand the principles on which we should act, to give a brief summary of those circumstances that are peculiarly apt to occasion the introduction of air into the circulating system during operations. Now it is well known that what is called by the French writers the "canalization" of a vein, or its conversion into a rigid uncollapsing tube, is the condition of all others which is most favourable to the introduction of the air into it. Indeed, except in those situations in which there is a natural movement of flux and reflux of the blood in the veins, this accident cannot occur unless these vessels be canalized, or, in other words, prevented from collapsing. This canalization of the vessel may be occasioned in a variety of ways. Either the cut

vein may be surrounded by indurated cellular tissue, which will not allow it to retract upon itself, but keeps it open like the hepatic veins; or the coats of the vessel may have acquired, as a consequence of inflammation or hypertrophy, such a degree of thickness as to prevent their falling together when divided. Again, the principal veins at the root of the neck have, as Bérard has pointed out, such intimate connections with the neighbouring aponeurotic structures that they are constantly kept in a state of tension, so that their sides are held apart when they are cut across. The contractions of the platysma and other muscles of the neck may likewise, as Mr. Shaw has shown, have a similar effect. In removing a tumour also that is situated about the neck, the traction exerted upon its pedicle may, if this contain a vein, cause it to become temporarily canalized; and the incomplete section of the vessel, especially in a transverse direction, must necessarily prevent the approximation of the sides of the incision in it, which will be rendered open and gaping by the retraction of the surrounding tissues. This patency in the incision in the vein is apt to be increased by the position that is necessarily given to the head and arm in all operations of any magnitude about the shoulders and neck. Lastly, the introduction of air into a vein will be favoured by the vessel being divided in the angle of a wound, the vein being, when the flaps that form that angle are lifted up, rendered open-mouthed and gaping.

[In looking over all those cases in which the wounded vein is particularized, Mr. Erichsen found that the wounded vessels were always in one or other of the abovementioned conditions,] and consequently, what the surgeon should peculiarly guard against in the removal of tumours about the neck and shoulders, viz., incomplete division of the veins and the employment of forcible traction on the diseased mass at the moment of using the scalpel. I am aware that, in removing tumours from the neck and shoulder, it is in many cases impossible to avoid drawing them forcibly upwards or forwards, in order to get at their deeper attachments; but if this be necessary the chest should, for reasons that will immediately be pointed out, be tightly compressed, so that no deep inspirations may be made at the moment that the knife is being used, or before a divided or wounded vein can be effectually secured.

But although it be necessary for the spontaneous introduction of air into the circulating system, that the vein be either canalized in one or other of the ways that has just been mentioned, or else that it be opened where the venous pulse exists, yet it is only during the act of inspiration that air can gain admittance into the vessel; and it is the more ready to do this the deeper the inspiratory efforts are. If a vein be opened at the root of a dog's neck, it will be found that it is only during inspiration that air rushes in; that none gains admittance during expiration, and but little, if any, when the inspirations are shallow, as when the chest is forcibly compressed by the hands; and that the rapidity of the spontaneous introduction of air is, *cæteris paribus*, in proportion to the depth of the inspirations.

This is in accordance with the experiments of Dr. Carson and Sir David Barry on the influence of the respiration on the circulation of the blood, and depends upon the tendency that there is to the formation of a vacuum within the thorax, more particularly in the pericardium, during inspiration; at which time the blood is carried with increased velocity along the veins in the neighbourhood of the heart; and when expiration takes place a temporary retardation occurs. This is particularly evident during excited respiration. Now, during operations the state of the breathing is such as to dispose the patient peculiarly to the entrance of air into the veins. When a patient is under the knife, the respirations are generally shallow and restrained, the breath being held, whilst every now and then there is a deep gasping inspiration, at which moment, if a vein be opened in which the pulse is perceptible, or that is canalized, air must necessarily be sucked in; and, as has already been said, in quantity and force proportioned to the depth of the inspiration. This, then, being the case, the mode of guarding against the introduction of air into the veins is obvious. The chest and abdomen should be so tightly bandaged with broad flannel rollers or laced napkins, as to prevent the deep gasping inspirations, and to keep the breathing as shallow as possible, consistently with the comfort of the patient. I have often found, as has already been stated, that the entrance of air into the veins of a dog could be arrested by forcibly compressing the chest of the animal so as to confine the respiratory movements, but that as soon as a deep inspiratory effort was made, the compression having been removed, a rush of air took place into the vessel. If, therefore, during an operation about the root of the neck or summit of the thorax, the chest be bandaged, as here recommended, the surgeon must be careful not to remove the compression until the operation be completed and the wound dressed, for if this precaution be not attended to, as the patient will most probably, on the bandage being loosened, make a deep inspiration, air may be sucked in at the very moment that all appeared safe.

If compression of the chest did not altogether prevent the entry of air into a wounded vein, it would at all events tend to lessen its quantity, as well as the rapidity and force with which it would rush in; which will always be found to be proportioned to the depth of the inspirations. Thus a very material point would be gained; for it has been fully proved from the experiments of Nysten, Cormack, and Amussat, as well as from recorded cases of recovery in man, that it is necessary that a certain quantity of air be introduced before death can take place, in confirmation of the observations made long since by Nysten, that a few bubbles of air would not occasion death. Magendie, states that he has several times, whilst injecting medicinal saline solutions into the veins of patients, seen air introduced without any bad consequences ensuing. In order, then, that the accident prove fatal, it is necessary that a certain quantity of air be introduced into the venous system. This quantity it is impossible to determine accurately, for obvious rea-

sons ; but it may probably be stated as being equal to so much as will obstruct the pulmonic capillaries to such an extent, as that a sufficient quantity of blood to support life does not pass through the lungs. If, therefore, in the event of not being able to prevent the entry of some air into the venous system, we can keep the quantity introduced below this, we should be able to avert a fatal termination.

Different plans have been recommended by surgeons for the treatment of those cases in which air has already gained admittance into a vein ; but, from the very fatal nature of this accident, it does not appear that much benefit has resulted from any of them. The recovery of the patient in some of the cases appearing to be rather due to the quantity of air that was introduced being insufficient to cause death than to any effort on the part of the surgeon. The two principal modes of treatment that have been recommended consist in the suction of the air from the right auricle, and the employment of compression of the chest.

[These modes of treatment, however, are in many respects objectionable.]

What, then, are the measures that a surgeon should adopt in order to prevent the occurrence of a fatal termination in those cases in which air has accidentally been introduced into the veins during an operation ? Beyond a doubt, the first thing to be done is to prevent the farther ingress of air, by compressing the wounded vein with the finger, and, if practicable, securing it by ligature. At all events, compression with the finger should never be omitted, as it has been shown by Nysten, Amussat, Magendie, and others, that it is only when the air that is introduced exceeds a certain quantity that death ensues. All farther entry of air having thus been prevented, our next object should be to keep up a due supply of blood to the brain and nervous centres, and thus maintain the integrity of their actions. The most efficient means of accomplishing this would probably be the plan recommended by Mercier, who, as it has already been stated, believing that death ensues in these cases, as in prolonged syncope, from a deficient supply of blood to the brain, recommends us to employ compression of the aorta and axillary arteries, so as to divert the whole of the blood that may be circulating in the arterial system to the encephalon. This appears to me to be a very valuable piece of advice, and to be the most effectual way of carrying out the first indication, that of keeping up a due supply of blood to the brain and nervous centres. The patient should, at the same time that the compression is being exercised on his axillary arteries and aorta, or, if it be preferred, as more convenient and easier than the last, on his femorals, be placed in a recumbent position as in ordinary fainting, so as to facilitate the afflux of blood to the head. The compression of the axillary and femoral arteries may readily be made by the fingers of two of those assistants that are present at every operation.

For the fulfilment of the second indication, that of maintaining the action of the heart until the obstruction in the capillaries of the lungs can be overcome or removed, artificial respiration should be resorted to, as the most effectual means of keeping up the action of that organ. Thus Sir B. Brodie states, that he has seen, in a dog that was beheaded, and whose cervical vessels were tied, the contractions of the heart maintained by artificial respiration for two hours and a half, at which time there were thirty-two pulsations in a minute, and from my own observations, I can state that, by the same means, this organ may easily be kept in action in an animal that has been pithed, for an hour and a half. For the purpose of keeping up artificial respiration, the Humane Society's bellows, if they be at hand, might be used, or, if they cannot readily be procured, a split-sheet might advantageously be employed. Before inflating the lungs, it will be necessary to remove every thing that can compress the chest, or interfere in any way with the free exercise of the respiratory movements. Friction with the hand over the præcordial region, and the stimulus of ammonia to the nostrils may at the same time be resorted to.

The third indication—that of overcoming the obstruction in the pulmonic capillaries, would probably be best fulfilled by the means adopted for the accomplishment of the second, viz. artificial inflation of the lungs. That the action of respiration, if kept up sufficiently long, would enable the capillaries of the lungs to get rid of the air contained in them, appears to be the case, for I have several times observed that, if a certain quantity of air be spontaneously introduced into the jugular vein of a dog, and artificial respiration be then established and maintained for half or three quarters of an hour, but a very small quantity indeed, if any, will be found on killing the animal in the cavities of the heart, or in the branches of the pulmonary vessels. I am aware that this is not altogether conclusive of the fact, as the air might be dissolved in the blood, or might still exist in the capillaries of the lungs although none might be found in the larger branches of the pulmonary artery ; but still it seems to me that we can hardly account for the large quantity of air that will disappear, when artificial respiration is kept up, in any other way than that some, if not all, of it passes out of the capillary vessels into the air-cells of the lungs.

It may be objected that this accident is so suddenly fatal that there would not be sufficient time allowed for the surgeon to put in practice the means just indicated ; but it admits of question whether the rapidity of death in the human subject is so great as is generally stated. The anxiety and consternation produced in the bystanders by so fearful an accident as the introduction of air into a vein during an operation, makes the death of the patient, perhaps, appear more sudden than it really is ; the cessation of the vital actions not being timed as in an experiment by the second-hand of a watch. In animals it frequently happens that a considerable time—half an hour or more, in some of Amussat's experiments as much even as two

hours and a half, elapses before the introduction of air proves fatal. Now, although the tenacity of life may be much greater in the inferior animals than in the human species, yet in man even the length of time that has elapsed between the first entry of the air and the occurrence of death has been very considerable; thus Beauchesne's patient lived a quarter of an hour after the occurrence of the accident; Mirault's between three and four hours; and Clemot's several hours. Amongst the other recorded cases I have not been able to find any but vague statements as to the length of time the patients lived. Thus, then, it would appear that in some cases, at least, the surgeon would have ample time afforded him to put in practice the plan of treatment that has just been suggested.

If by these means we should succeed in warding off an immediately fatal termination to the accidental introduction of air into the veins, we must watch carefully for the supervention of pneumonia or bronchitis, which diseases Nysten has shown to be very apt to occur in those animals that recover the immediate effects of the accident. That the same danger exists in man is evident by the two cases that have occurred to MM. Roux and Malgaigne respectively. In Roux's case the patient lived seven days after the accident, at the expiration of which period he died of pneumonia; whilst Malgaigne's patient died on the fourth day of bronchitis.

In recapitulation, then, the following are the principal points that it has been endeavoured to establish in this paper:—

1st. That the primary arrest of the circulation takes place in the capillaries of the lungs, or in the terminal branches of the pulmonary artery, in consequence of inability in the right ventricle to overcome the mechanical obstacle presented by air-bubbles in these vessels.

2nd. That respiration and animal life cease in consequence of a deficient supply of arterial blood to the central organs of the nervous system.

3rd. That as air enters the veins in quantity, in force, and in rapidity, proportioned to the depth of the inspirations, the best mode of preventing the occurrence of the accident, or, at all events, of lessening its probable fatality, would be in all operations about the dangerous region,—the root of the neck and summit of the thorax,—to bandage the chest tightly with broad flannel rollers or laced napkins, so as to prevent deep gasping inspirations, and to keep the breathing as shallow as possible, consistently with the comfort of the patient.

4th. If air have already gained admission, prevent its further entry by compressing, or, if possible ligaturing the wounded vein by which it had entered.

5th. Keep up a due supply of blood to the brain and central organs of the nervous system, by placing the patient in a recumbent position, and by compressing his axillary and femoral arteries.

6th. Maintain the action of the heart, by artificial respiration and friction on the precordial region, until the obstruction in the capillaries can be overcome or removed.

7th. Remove, if possible, the obstructions in the capillaries of the lungs by artificial respiration.

8th. If the patient survive the immediate effects of the accident, guard against the supervention of pneumonia or bronchitis.

Ed. Med. and S. J., June, 1844, *p.* 1—24.

75.—ON TRACHEOTOMY.

By James Arthur Wilson, M.D., Physician to St. George's Hospital.

[In two cases of cynanche which occurred to Dr. Wilson, in 1830, the patient died from asphyxia in consequence of the parts about and above the glottis being diseased—but in neither case had the diseased action extended below the level of the glottis—it terminated exactly *there*, so that an opening made between the thyroid and cricoid cartilages would have afforded instant and entire relief. Dr. Wilson states, before the Medical and Chirurgical Society, that in consequence of these cases, he recommended tracheotomy in the following cases:—]

Mr. W. C., æt. 27, complained of slight sore throat on the evening of July 7, 1843. He afterwards attended a crowded assembly, where he danced much and perspired freely. On his return home he was unable to sleep, from uneasiness of the fauces, and a sense of choking. At ten A.M., July 8th, he was seen by Mr. Tupper, who ordered leeches and calomel, and as no relief had been obtained, at two P.M. 24oz. of blood were taken from the arm.

At seven P.M. the author saw the patient, who was then lying on his back, and breathing with great difficulty; by gesture he complained of pain across the larynx; the respiration was hurried, and there was a stillness of manner expressive of a dread of all movement; he seemed, moreover, fast lapsing into a state of coma. The operation of tracheotomy was resolved upon, and at nine P.M. was performed by Mr. Keate. By an incision through the integuments, the trachea was exposed beneath the thyroid gland, and then divided vertically to the extent of one-third of an inch, and through this opening a canula was introduced. Instant relief was obtained, but before ten minutes had elapsed he was attacked with violent spasms of the chest, with a struggle for breath, as if from immediate suffocation; all consciousness directly ceased. The canula was immediately withdrawn, and the orifice in the trachea cleared from blood, and kept widely open. The breathing at length became more natural, and the face resumed the character and tint of life. Not long after this a large quantity of mucus mixed with blood was rejected from the mouth, and it was then found that the patient again breathed through the larynx, when the canula was with caution finally withdrawn. The patient gradually recovered his consciousness, and expressed by writing that his "breathing was quite easy." He slept at

intervals during the night, and was convalescent from this time. Early on the following day, the voice was in some measure recovered by a low stridulous whisper. The fluids taken by the mouth reappeared on more than one occasion with bubbles of air through the orifice in the trachea. Seven days after the operation the wound was closed by granulation.

The author observes that "nothing is more worthy of remark in this case than the immediate suspension of all diseased action in the throat and larynx, consequent on the admission of air into the trachea. The strain having been removed from the inflamed structures, they soon recovered their healthy faculty of nutrition to the system at large, every draught of fresh air becoming at once specific, and the process of cure was complete." He states that, for the future, he should in all cases be urgent (where delay was possible) for a sufficient interval of time after the division of the integuments, in which to staunch the blood, before the final breach of the trachea. The instrument generally to be preferred for this purpose is the trochar, and the method of performing the operation has been fully described by Dr. John Wilson, in the 25th vol. of the Transactions of this Society, in a paper of high interest, entitled "Cases of Laryngitis relieved by Operation."

Since making the above communication to the socieiy, the author was consulted by Mr. Frogley, of Hounslow, in a case of laryngitis, in which the life of the patient was saved by the operation of tracheotomy. The case was that of a young lady, about twenty years of age, who, after suffering some days from "influenza," was attacked with symptoms of laryngitis. They were at first relieved by leeches, calomel, &c., but at two o'clock in the morning of Feb. 7, Mr. Frogley was called in haste in consequence of an attack of stridulous breathing; the pulse was scarcely perceptible; the countenance ghastly, and the symptoms generally those of a person fast dying from suffocation. Under these circumstances Mr. F. at once proceeded to operate. A small incision having been made through the skin, immediately above the sternum, the subjacent cellular tissue was separated, chiefly by the blunt edge of the knife, and the trachea divided with little or no loss of blood; with some little difficulty the canula was then introduced, and immediately on the first rush of air into the trachea, the patient opened her eyes, and exclaimed, "Oh! now I can breathe." Her complexion soon resumed its natural tint, and her voice its proper intonation; she swallowed with ease, and soon fell asleep, breathing tranquilly through the canula, which was secured by threads and adhesive plaster. The author saw the patient at four P.M. of that day, and found her without complaint, save a little pain from pressure of the tube, and finding that no air escaped through it, he directed its removal.

On the 21st Feb., a fortnight after the operation, the author was informed that "his patient was going on well; the wound all but healed, and she had not a single bad symptom." About thirty hours

after the operation, she coughed up some dense membranous-looking phlegm, after which she did not breathe through the wound.

Med. Gazette, March 8, 1844, *p.* 476.

76.—ON THE TREATMENT OF FISTULA LACHRYMALIS BY DILATATION.

By Isaac Parrish, M.D., one of the Surgeons to Wills' Hospital, &c.

In several cases of fistula lachrymalis, which have recently fallen under my care, a plan of treatment has been pursued, differing in some respects from that generally recommended; and sufficiently satisfactory in its results to warrant a public notice.

The principle of treatment is not new; it is precisely that which is recognized by the best authorities, in the management of strictures of the urethra, by the gradual and steady operation of bougies of various sizes. The two affections are indeed very similar; in both a mucous canal is obstructed by the thickening of its internal surface, under the influence of chronic inflammation; whereby the fluids destined to pass through it, are impeded in their course.

In the case of the nasal duct, when the obstruction is complete and permanent, the lachrymal sac becomes inflamed, or distended to such a degree, as either to burst spontaneously, or to require an opening—thus forming a fistulous opening over the sac.

The obvious indication under these circumstances, is to re-establish the passage to the nose, and thus to relieve the patient from the unpleasant consequences of a constant accumulation of fluids within the lachrymal sac.

In mild cases of this description, injections into the sac and duct by Anel's syringe, the passage of probes, and the adoption of a course of treatment to reduce inflammation, has been found sufficient to effect a cure. In the large proportion of cases, however, a more energetic practice becomes necessary. The course generally recommended, and practised, is to enlarge the fistulous opening, and insert into the duct the nail-headed style of Ware, which is worn by the patient, and is said to secure the passage of the tears to the nose.

Never having used this instrument, I cannot speak from experience of its merits, having always been able to effect the desired object by less objectionable means.

The plan pursued has been, first to reduce any inflammation which may exist around the fistulous sore, by means of emollient poultices, and then introduce a small piece of fine wax bougie, having an acute point, down to the strictured part (or as far as it can be inserted), and by turning over its blunt end to secure it there by means of an adhesive strip drawn firmly over it. This may be removed in a day or two, and after washing out the parts, may be re-introduced, or one of a larger size inserted, if it can be borne. At the commence-

ment of the treatment little more will be accomplished than to dilate the fistulous orifice, and to induce a more healthy action in the mucous surface of the sac and duct, but by perseverance in the plan, an advance will be made from day to day upon the strictured surface ; until, finally, a bougie can be passed through the whole extent of the canal. This being accomplished, the dilatation should be continued, until the bougie will pass freely, and until all hardness and inflammation has disappeared from around the fistulous orifice—when it may be permitted to heal up, which it will usually do under simple dressings.

By this process the canal is gradually dilated, and its mucous surface restored to a healthy condition, without doing violence to the parts, while the duct is placed in a condition to resume its natural functions, without the necessity of permanent dilatation. If, however, there should be a disposition to relapse, after the closure of the orifice, it may be counteracted by the use of stimulating ointments to the inner surface of the lids, by astringent washes, or by such other means as circumstances may indicate, preventing, if possible, the re-opening of the fistulous sore.

Beer, the German oculist, has recommended the use of catgut to force the obstructed duct. A piece of catgut of the ordinary length and size of a small fiddlestring is passed through the duct into the nose, one extremity is brought out and fixed near the ala nasi by sticking plaster ; and the other secured to the brow by a turn or two of bandage. Every day a fresh portion of catgut is drawn through, until several sizes have been made to pass, when the cure is considered complete, and the fistula is allowed to heal.

A serious objection to this method is found in the difficulty of effecting the passage of the duct, at one operation, by any instrument, however fine, and should the operator succeed, the force required would be apt to tear the mucous surface and excite a degree of inflammation, very unfavourable to the ultimate restoration of the parts ; whereas, by the gradual process here recommended, the difficulty is slowly overcome, while, at the same time, the diseased mucous surface is restored to healthy action, and the integrity of the canal is preserved.

Indeed, one of the great advantages of the bougie made of waxed linen, is its bland and salutary action on a surface which has been thickened by chronic inflammation. This is evidenced by the increase of mucous discharge which follows its introduction, and in the gradual return of the membrane to its normal state. The same remark applies to strictures of the urethra, and hence it was that the late Dr. Physick and others preferred the bougie of waxed linen, for the treatment of stricture, to those of more modern invention.

The instrument is made by dipping a piece of fine linen into white wax in a melting state, and suddenly withdrawing it. It is then allowed to cool, and cut into portions which, when tightly rolled, form a bougie, of any size which may be required.

Another advantage possessed by this instrument, is, that it may

be cut or bent with great ease, and be made smaller by unwrapping, without the necessity of having a greater number of sizes already prepared.

It may be mentioned, also, that this form of bougie is very useful in the treatment of fistulous sores or sinuses, where it is important to excite a moderate degree of inflammation.

The introduction of a bougie of suitable size into a sinus, and its retention there by appropriate dressings will often be found more effectual in promoting healthy action, than the use of stimulating injections, or other more violent means.—*Philadelphia Medical Examiner.*

Dublin Journal of M. S. Jan. 1844, *p.* 516.

77.—ON THE NATURE AND TREATMENT OF PILES.

By M. Lisfranc.

Hæmorrhoidal tumours are composed of a sort of fibrous tissue, in which only a few vessels are to be found when there is no congestion ; and when this exists, however violent it may be, these vessels are never so numerous as in erectile tumours. On upwards of one thousand bodies, from which I removed the rectum, and in the numerous operations I have performed, I never as yet have met with a real erectile tumour in this region. This fact renders the prognosis less dangerous, and an operation not so indispensable. It may, therefore, be concluded—1°, that though, without a doubt, veins more or less voluminous may be found in hæmorrhoidal tumours, still these last are not formed of varicose veins ; 2°, that their composition differs from that of erectile tumours.

Let us now examine the best mode of treatment for chronic hæmorrhoids. They cause little or no pain ; if they protrude when the bowels are acted upon, the patient easily reduces them himself ; they offer no ulcerations nor indurations. In these cases most surgeons perform extirpation, without reflecting on the danger which may follow this operation ; for it must not be forgotten that it sometimes gives rise to very serious accidents. I never operate on similar occasions ; and am convinced that a surgeon who cures without having recourse to the knife is far more useful than the most brilliant operator. I strive to diminish the size of the hæmorrhoidal tumours without employing the bistoury. A mild diet, gentle exercise, large or small venesections, as needed, produce generally an amelioration ; when these fail, I direct on the parts affected a shower-bath of Bareges water, or pure water, at the temperature of 68° F., and an injection into the interior of the rectum. By this method of treatment, if I do not succeed in obtaining a radical cure, at least I soothe the patient's sufferings. If you have not the means of administering a shower-bath, and the hæmorrhoids are protruded, by passing slightly over their surface the nitras argenti, not so as to cauterize, but merely to excite them, you will often succeed in obtaining their reduction ; after which, in general, they do not re-

appear. When the hæmorrhoidal tumours are slightly ulcerated, I cauterize them with the nitrate of silver or the acid nitrate of mercury. If the ulcerations are inveterate, and accompanied by induration of the surrounding parts, an operation is necessary; but that generally employed, viz., to seize the tumour with *Musieux pincers*, and to cut it off, may give rise to serious and even fatal hæmorrhage. The method I would advise in such cases does not present this danger, and is thus performed:—Two semi-lunar incisions, united by their extremities, must first be made on the tumour; this is then seized, so as to prevent the parts retracting as divided; the hæmorrhoid is next extirpated, not at once, as formerly, but by small incisions, so as to permit me to tie or twist the vessels as they are cut; finally, when it is nearly removed, I seize the pedicle between the forefinger and thumb, to be certain that no artery exists in its interior, and finish the operation slowly and carefully. A consecutive accident, very serious when it takes place, is *coarctatio recti*. In several cases Dupuytren was obliged to perform a second operation, in order to restore to the intestine its natural size, though he had employed all the necessary precautions to prevent this accident. During the first two or three days we must not introduce anything into the rectum; but as soon as the fears concerning the development of traumatic inflammation are over, we must have recourse to tents of large dimensions, and make the patient wear them constantly for at least three weeks, after which, for two or three months, he must introduce a large gum-elastic sound into the intestine every evening.

Med. Times, *Ap.* 6, 1844, *p.* 5.

78—NEW INSTRUMENT FOR CRUSHING CALCULI IN THE BLADDER.

[Mr. Simpson the ingenious surgical instrument maker in the Strand, describes this instrument in a letter to the Editor of the Medico-Chirurgical Review, as follows:—]

Having been applied to a few weeks back in a case where the stone was supposed to be too large to extract without first breaking it, and as the instruments that have been hitherto made, have proved useless, in consequence of the difficulty, or rather impossibility of opening the blades of the forceps after their introduction into the bladder, so as to grasp and crush the stone, partly from the great thickness of the blades, and partly from their being fixed together, I have constructed the instrument described in the following lines, from which I consider it will be obvious, that as the blades are introduced separately, and the stone may be comparatively easily crushed, the important and so long desired object is at length attained, namely, of being enabled to break up a large stone, and extract it by fragments, without greater danger than that usually attending the ordinary operation of lithotomy.

This instrument which is for the purpose of crushing calculi that are found to be too large to extract by the ordinary operation of lithotomy, consists of two strong, curved, flattish blades, rather more than three inches in length, which, together with the handles, makes the whole length of the instrument about fourteen inches. The blades are introduced into the bladder separately, so as to get round a large stone more easily. After the stone is seized between the blades, they are locked or connected together by means of a button joint, something similar to that of Rigby's midwifery forceps. They then resemble a pair of very strong, large-sized lithotomy forceps. After the blades are locked together, a flattish bar with a small screw cut on the edges, is fixed by means of a screw to one side of the forceps, and passed through an opening made for it on the other. On this screw and outside the handles of the forceps, a washer is first placed, and then the handle with the female screw is put on the bar, and by turning it on the screw bar, the handles and blades are gradually closed together. Should the stone not be very hard, this power may be sufficient to crush it, but if not, a slide fits into an opening in the screw bar that serves to close the blades. This slide fixes by means of a screw, in the centre, according to the width the blades may be opened, and a drill is passed through the hole in the slide, (in which a screw is cut for the purpose), and also through a swivel at the lower end of the forceps, almost under the joint. A blunt gorget may be passed into the bladder to guide the drill, and prevent its touching any part of the wound. The handle of the drill is then turned round and round, till it arrives at a stop placed on the drill to prevent its passing beyond the ends of the blades of the forceps, and injuring the bladder, thus boring away the centre of the stone, and consequently considerably weakening it. The blades may then be closed by turning the handle on the screw bar, and thus crush the stone to pieces. Should the first hole not weaken the stone sufficiently, the forceps can be opened, and the stone loosed from their grasp, and by moving the stone, and seizing it in a different position, bore another hole, but the probability is, that in most cases, the one hole would be found quite sufficient. The stone having been broken into small pieces, these can then be extracted by the usual forceps or scoop in the ordinary way. The length of the incision in the bladder required to introduce and use these forceps, is not more than that usually made for the ordinary operation in the average of lithotomy cases.

There is also another pair of forceps of about the same length, but with straight blades, and made much stronger, to be used in the same manner as those already described, but so as to enable the operator to crush the stone, without having recourse to the drill at all.

Med. Chi. Rev., April, 1844, *p.* 576.

79.—ON DISCHARGES FROM THE EARS.

By W. R. Wilde, Esq., M.R.I.A., Lecturer on Diseases of the Eye and Ear, in the School of Medicine, Dublin, &c.

[Mr. Wilde's long paper, or rather treatise on this subject, is one of the most interesting and practical which we have ever seen.

Most of the discharges from the external passage of the ear, whether of a mucous, purulent, sanious or sero, or muco-purulent nature, are generally the result of inflammation.]

With an organ of such great delicacy, sensibility, and vital importance, endowed with particular nervous energy, possessing peculiar vascular arrangements, and composed of so many structures in common with the rest of the body as well as those peculiar to itself —the skin, the highly organized dermal texture, with its special glandular development—cartilage, cellular, mucous, serous and fibrous membranes, muscles, ligaments, bone, periosteum, &c., we should naturally expect that the inflammation of each of these textures would give rise to peculiar characters. Thus, with the dermal texture, we have the diffused, the erysipelatous, or the herpetic form, appearing in the auricle and external meatus, and thus producing vesicles, bullæ, desquamation, ulceration, or muco-purulent discharge, as they advance in their progress, or extend into the ear; then comes the circumscribed form, as in abscess, generally in the anterior wall and floor of the external orifice; and the purely phlegmonous kind, in both the chronic and acute form, in the more internal parts of the tube, and the surface of the tympanal membrane. Again, we have divisions into the structure or locality affected, as of the pinna or external concha; the meatus; the membrana tympani; and the inflammation of the middle ear. We really know so little of the inflammatory affections of the internal ear, that we do not deem it advisable to mix them up with the present question.

Inflammations of the auricle are generally of an eryspelatous nature, and those of the cavity of the tympanum or middle ear, when arising spontaneously and not propagated from other parts, are mostly of a diffuse character, affecting the whole mucous membrane, and ending in suppuration. We now deal more particularly with those of the external tube and external surface of the membrana tympani. I would divide these into simple acute inflammation of the meatus and the tympanal membrane, diffused over the entire of the surface, analogous to the severe catarrhal inflammations of the eye; herpetic inflammation, chiefly affecting the cuticle and ceruminous and sebaceous glands, resembling ophthalmia tarsi; simple circumscribed inflammation or abscess of the tube, occurring chiefly at its orifice, like hordeolum upon the margin of the eyelids; abscess occurring between the layers of the membrana tympani, like hypopion in the cornea; chronic diffuse inflammation of the meatus and membrana tympani, with profuse muco-purulent discharge, analogous to chronic ophthalmia; and the same symptoms attended with

a granular state of the tympanum, strongly resembling the well-known granular condition of the upper eyelid, and vascular state of the cornea, assimilating pannus. To these latter may be added the same symptoms and a similar disease with polypus growing from the walls of the external tube; and lastly, chronic otitis, attended with otorrhœa, complicated with fistulous openings of the cartilage, perforating ulcer of the tympanum, denudation of the ossicula, and polypus or fungus of the middle ear or drum; and caries of the bony parietes, and the mastoid process.

[Up to a recent period we possessed no better means of examining the external meatus and the membrana tympani than the common ear speculum. Kramer of Berlin has since made use of an argand lamp for the purpose of throwing a strong light into the ear. In form, construction, and effect, it very nearly resembles a common magic lantern, consisting of a tin box, having its interior blackened, and being provided with a strong lamp and powerful reflector, opposite which there is a tube containing two convex lenses, each two inches and a half in diameter. But all artificial light has one great objection attending it when examining those conditions of the parts, as in inflammation, &c., where colour and the vascular arrangement form the chief means of true diagnosis. The instrument which is now generally used to examine the external passage of the ear is a conical silver tube, highly polished inside, by means of which the light can be most beautifully thrown to any part of the meatus.

We have already stated that most discharges from the external ear are owing originally to some inflammatory action, produced perhaps by cold, porrigo, crusta lactea, herpetic and other eruptions extending to the ear, hardened wax, fevers of every description, especially the exanthemata, and scarlatina, or finally by some malignant disease of the petrous portion of the temporal bone itself.]

With regard to the treatment of otorrhœa, it is scarcely necessary, after what has been already advanced upon the subject, to state, that our first step must be to examine minutely the condition of the external auditory canal, by syringing out the part with tepid water, and then submitting every portion of it to the action of strong light by means of the tubular speculum. In the early stage, and the mildest form of this complaint, all that we may be able to discover is a vascular, slimy condition of the lining of the whole tube and external layer of the membrane of the drum, which is thickened and opaque, and having almost invariably a fasciculus of red vesicles coursing along the line of the malleus.

In the state of simple otorrhœa, I generally paint over the surface with a solution of nitrate of silver, the strength of ten grains to the ounce, applied with a fine camel's hair pencil, which I find far preferable to the old practice of dropping in the solution; first, because by thus rubbing it on the parts, some more and some less, according to their condition, it removes a quantity of the mucous discharge which adheres with great tenacity, and thereby makes its effect more certain; secondly, it may be required only to one par-

ticular spot; and thirdly, by this method the concha, external parts, and, as it sometimes happens, the dress also, are not blackened by it. This application is repeated about every third day, and, in the mean time, the ear is syringed night and morning, and even oftener if the discharge accumulates, with plain tepid water, and a gum elastic bag, which, when used by friends, or attendants, or the patient, is much preferable to the usual piston syringe; and at night a slightly astringent lotion is dropped into the ear till it fills up the meatus, allowed to remain there for a few minutes, and then let run out.

The various salts which enter into the general composition of eye collyria are here particularly applicable, especially those of lead, zinc, and copper. I generally prefer the former, either in the state of acetate of lead, from eight to twenty grains to the ounce, or what is a much more elegant preparation—

Liq. Plumbi Diacet. ℥i. et Aquæ. Rosarum ℥i.

I do not think the present officinal solution of lead is as good or efficient a preparation as the "Extract of Lytharge," of the old pharmacopœias. When zinc or copper is employed, the preparations I find most suited are the Liq. Aluminis Comp. and the Aquæ Sappherinæ, or Liq. Cupri Ammonia-sulphatis, in like proportions with the lead lotions. Where the discharge is fœtid, the chloride of lime lotion used in the morning is of use, being slightly astringent, and getting rid of the disagreeable smell.

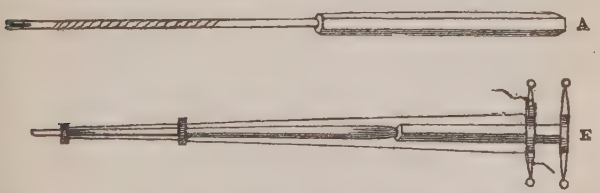
With regard to cleanliness, or, in other words, to syringing, so very much depends upon it, that the surgeon never can sufficiently impress its importance upon the patient or the attendants. In simple mucous discharge without polypus, granulations, or affections of the deep-seated structures, it is the chief part of the treatment; and yet how difficult to have it performed regularly! Allowing the discharge to accumulate in the meatus is undoubtedly one of the principal causes that perpetuates otorrhœa in any of its forms. When the meatus becomes a secreting cavity it in many respects resembles a fistula, and the longer it has existed the more difficult it is to heal; and this, its fistulous character, it is, which, especially in a narrow meatus, promotes the continuance of a slight thin discharge, even long after the granulations or other producing causes have been removed. The action of the external air, therefore, upon this secreting surface, similar to what is experienced in health, can never be too much observed.

Towards the close of an otorrhœa from simple chronic otitis, especially in children, I have frequently remarked, that they are liable to slight fresh attacks of otalgia, and sometimes small abscesses form round the mouth of the meatus. These are, I believe, best warded off by the application of a vesicating liniment behind the ears on the mastoid process, and keeping up this gentle counter-irritation for some little time after the otorrhœa has ceased. For this purpose the croton oil dissolved in soap liniment; or the tinc-

ture of iodine, made stronger and more soluble by the addition of a little hydriodate of potash and the *Acetum Lyttæ*, answers very well.

The complications that render otorrhœa at all times tedious, but now difficult to heal, are morbid vascular growths ; of these, granulations covering over the face of the membrana tympani are a frequent cause. In such a case the bottom of the auditory tube will appear as red and vascular as a granular eyelid, and it becomes an object of interest to know whether it is the surface of the membrane or the inner wall of the tympanum that we see. A simple inspection, by means of a strong light, will generally determine this, for although the greater portion of the membrane of the tympanum may be destroyed, and even the incus or orbicular bone has been cast off, still the malleus in the great majority of instances remains. A fine probe fitted into a handle will often by one touch determine whether we are percussing a thickened membrane on the promontory of the middle ear ;—making the patient press the air through the ear, by holding his nose and shutting his mouth, and then making a forced expiration ; or again, by the fluid of the injection passing into the throat, we may judge of the perforated condition of the membrane. But as it often occurs in otorrhœa, or where the cavity of the tympanum is exposed, that the Eustachian tube is likewise blocked up with granulations, or closed by inflammation, those two latter methods are not always applicable. In the latter case, injecting fluids through the Eustachian tube is likewise inapplicable. In most instances, however, the practised eye can at once determine the condition of the parts. Many persons who have moderate sized apertures in their tympanal membranes can, by pressing the air through the Eustachian tube, produce a whistling noise.

Wherever the granulations grow from, whether from the membrane itself or from the walls of the tympanum, the means I find most useful for their eradication is the solid nitrate of silver rubbed over the part about every second day, or oftener if neccessary, and for this purpose I have for some time past employed the little instrument marked A, and represented in the accompanying woodcut :—



This is five and a-half inches long: it consists of a silver tube cut spirally for three-fifths of its length, and having an aper-

ture in the side near the extremity. In using this *port-caustic*, a little nitrate of silver is melted over a lamp, in a small platina ladle, and then, when about cooling, the end of the *port-caustic* is dipped into it till the aperture and extremity are filled and coated over with the caustic. The elastic spring of this instrument, while it prevents any injury to the ear, from the starting of the patient, can also be bent, so as to be applied with ease on any part of the auditory canal, and the caustic can in this way be reduced to a finer point, and made more secure, than by any attempt at fixing in, a portion of the solid material. The caustic should be rubbed over the part about once in every two days, and in the mean time the syringing, the astringent lotions and other applications recommended in the treatment of simple otorrhœa, from chronic otitis, should be strictly enforced.

Three cases of this description have just left my care cured. Two of them were little girls, one aged eight, the other six ; in both, the discharge appeared on the subsidence of scarlatina three years and a quarter ago, and continued without intermission ever since, occasionally increasing in quantity and consistence, after attacks of pain, to which they were subject on catching the slightest cold. I was consulted for both cases the same day, now nearly three months ago. The hearing was considerably impaired, the otorrhœa was double in both cases ; the discharge profuse, highly fœtid, and in one instance sanious. In general health, both were to all appearance well, and both had gone the usual round of sea-bathing, country air, aperients, tonics, &c. In both, the apertures of the meati were thickened, and the conchæ crusted and excoriated by the discharge. In both, the passage was free from excrescence, and although the lining membrane was turned into a muco-purulent secreting surface, the bony case of the ear and mastoid process appeared sound. Both tympanal membranes in both children were red, vascular, villous, and in part granular. The nitrate of silver was applied in substance with the *port-caustic* to the membranes of these children, till it completely whitened the surface, and repeated every fourth day for the first month, then once a week, and latterly the solution has been applied with the brush occasionally. In the meantime strict attention has been paid to having them syringed twice a day ; for strange to say, although they are in the upper walks of life, the most that was ever done was to soak up the discharge with the towel when it became offensive. At night dropping in the lead lotion,—never allowing the discharge to accumulate,—taking plenty of open air exercise, making use of a nutritious diet, and taking occasionally, particularly when any pain was felt in the ear, a few grains of the "grey powder," (Hydr. c. Creta), with a little rhubarb. After the second application of the caustic, the running was checked, its consistence then became thicker, more ropy and mucous, less purulent, and greener in colour. Hearing daily improved, but toward the end of the sixth week, when the discharge had nearly ceased entirely, both these children were

attacked with pain in one ear, and a slight increase of thin, watery discharge. A leech applied over the tragus of each ear, and the use of the aperient powder, soon afforded relief. In one of these children the skin of the meati became affected, but both are now perfectly well; the membrana tympani is, it is true, white and thickened, but the hearing is in both nearly as good as ever it was before the attack of scarlatina. In one of these girls, touching the membrana tympani with even a hair pencil, always brought on a violent fit of coughing.

The last cause and complication of otorrhœa is what I have throughout this paper denominated polypus. Fleshy, pedunculated, morbid growths in the ear, nearly colourless, having a thin cuticular covering, unattended by pain, not appearing as the result of inflammation, and unaccompanied by discharge, I have seen, but such cases, in comparison with those to which I have so frequently alluded, and am now about to describe in detail, are extremely rare. Throughout this essay I have constantly employed the terms fungus and polypus as indicative of those morbid growths, the product of inflammatory action and long continued otorrhœa. By fungus, however, I particularly allude to those vascular and granular masses which generally grow either from diseased bone, or upon the destruction, in whole or in part, of the membrana tympani, and whose attachments are to be found principally in the very bottom of the auditory passage; while polypi are, for the most part, confined to the glandulo-ceruminous portion of the tube, and are attached by narrower roots than the fungi.

It is stated in books that polypi are smooth on their surface, while fungi are lobulated. Here, however, is a very good specimen of a polypus removed from the posterior wall of the glandular portion of the meatus presenting such characters. In many instances polypi may be co-existing with granular tympani or fungous masses proceeding from the middle ear. Generally the polypus grows more externally, that is, appears at the external orifice, while the fungus is mostly confined to the bottom of the tube. The latter, may, however, appear externally.

[In a case of this kind a highly vascular fungous mass was found completely filling up the middle of both meati which were extremely thickened and narrowed. These at first seemed to be polypi, but upon closer examination they did not grow from any particular part of the wall of the canal, but appeared to proceed from the membrana tympani.]

The nitrate of silver, in substance, was applied to these growths about once in every four days for upwards of six months, till they were completely reduced to the level of the tympanal membrane, which was found to have a large perforation in its centre on both sides, through which the fluid injected passed into the pharynx. At this period the discharge considerably lessened, and the power of hearing very much increased; upon examination with the speculum, the

auditory canal still presented a whitish thickened appearance, and the membrana tympani, with the aperture in its upper or anterior section, was still red and villous; from this time forward the use of the solid caustic was omitted, and the solution was applied instead, in the the manner which I have described in similar cases; while lead and chloride of lime washes, with constant syringing, were never omitted.

For the removal of polypi and other fungous growth, various mechanical means have been devised in the shape of forceps and ligatures, &c. Without entering into a historical description of all these, it is enough to remark, that they were insufficient for the purposes for which they were invented; the former, owing to the brittleness and vascularity of the substance they were intended to grasp, and the latter from the difficulty of applying them with accuracy to the root or foot-stalk of the morbid growth.

The instrument of greatest value for the removal of aural polypus from any portion of the meatus, is the small snare-like apparatus represented by figure E, consisting of a fine steel stem, five inches in length, with a moveable bar sliding on the square portion towards the handle; in a properly constructed instrument the small upper extremity, flattened out and perforated with holes running parallel with the stem, should not exceed the fourteenth of an inch in its greatest diameter. A fine silver, or what is much better, from its greater flexibility and strength, a fine platina wire, with its extremities fastened to the cross bar at the handle, passes through the holes in the flattened end of the small extremity of the instrument, and allowed to be of such a length, as, that when the bar is drawn back close to the handle, this ligature is put fully on the stretch, and drawn tight through the holes at the small extremity. In using it, the cross bar is pushed forward and a noose made of the wire at the small extremity, of sufficient size to include the morbid growth, which it is then made to surround, and toward the root of which it is pressed by means of the stem; the cross bar is then drawn up smartly to the handle, and it never fails of either cutting across or of drawing with it whatever was included in the noose. Some bleeding generally follows, which should be allowed to subside, then syringe the parts with slightly tepid water, and again examine the ear, and if possible discover what portion of the polypus may remain, which, whether it may be the mere point of attachment, or a portion inaccessible to instruments, should be invariably touched with the armed *port-caustic*, and the same application applied from day to day until all traces of the morbid growth are vanished. Unless this latter point of practice be strictly and perseveringly adhered to, it is in vain that we can expect a total eradication of the disease; no more, however, of the auditory apparatus should be submitted to the action of the caustic than the actually vascular, granulating, or fungous surface. I have frequently witnessed the whole canal in a state of ulceration, and an erysipelatous inflammation extending over the entire auricle, from a large stick of lunar caustic having been inserted

into, and rolled round in the meatus to remove a polypus or fungous growth, the eradication of which had already been frequently attempted by instruments ; a practice as cruel as it was ineffectual.

The little instrument which I have represented in the wood-cut, and just detailed, and which may be denominated a snare, will be found useful in other parts as well as the ear. For the principle of it we are indebted to Mr. William Robertson, one of the surgeons to the Kelso Dispensary, who published a drawing and a description of such an instrument, "*for extracting polypi from the nose,*" in the "Edinburgh Medical and Surgical," for 1805 ; and it was first introduced into practice in this country two years afterwards by my friend Dr. Little, now surgeon to the Sligo Infirmary. Mr. Robertson never applied it to the purposes of aural surgery, for which his apparatus was far too large ; but he certainly deserves the credit of the originality of the invention. It has now been in general use for some time past in this city for the removal of nasal polypi, for which it is most admirably adapted.*

Dublin Journal of Medical Science, Jan. 1844, *p.* 388—444.

---

80. -ON THE TREATMENT OF STRICTURE.

By B. Phillips, Esq., F.R.S., &c. &c.

[We need hardly say that 98 cases of stricture out of every 100 are owing to gonorrhœa, and are the result not so much of the acute stage as of long continued chronic action, which usually affects the urethra near its curvature. The diminution of the stream of urine may be so gradual that it is not at first perceived: at last, the contraction, slowly as it grows, prevents the bladder from completely emptying itself, because the bladder, like every other muscular structure, is incapable of continued action beyond a certain time ; that time is long enough to allow of the complete evacuation when things are in a natural state, but when the bladder is allowed to get too full the expulsive action is frequently not sufficiently sustained for the escape of all the contents. So when the canal of the urethra is made smaller than natural, a similar result follows. In this state of things a certain portion of the contents of the bladder are constantly retained, and the desire to make water becomes in consequence more frequent. Instead of lying in bed from night till morning, the patient is disturbed once or oftener in the night, and then he goes to his medical man. Not, perhaps, because he thinks he has a stricture, but because he has a little annoying discharge, and a fre-

* In Retrospect, vol. 8, p. 224, we referred to Professor Rosa's operations on the eye without duly acknowledging the work from which the article was extracted. This was quite an accidental omission, as we are most anxious, at all times, to give praise wherever it is due. We may therefore state, that it was extracted from an account of Ophthalmic Surgery in the Australian dominions, by W. R. Wilde, Esq., the same gentleman who has written the above able article.

quent desire to make water. To the medical man the history of the case seems to point clearly to stricture; but he does not pronounce a positive opinion until he has passed a bougie along the urethra.

In many cases, however, we are not consulted until the stream becomes extremely small; or even until the urine dribbles away drop by drop, with a constantly recurring desire; with, perhaps, the parietes of the urethra behind the stricture giving way, to be followed by urinary abscess and fistula, or with some damage done to the prostate, the spermatic organs, the bladder, or the kidney. In this state complete retention is always impending; any slight irritation may cause the complete blocking up of a passage which before was barely pervious.

In the treatment of stricture it is an important fact to ascertain whether the patient is labouring under complete retention, or whether he can make water in small quantities at a time. In the former case there is no time to lose, and the most decisive steps must be taken; in the latter case we may proceed to adopt our measures more leisurely.

If the patient can make a little water, our attention is to be directed to make the passage larger; and for this purpose two agents have been chiefly depended upon, viz., *dilatation* and *cauterization*.]

Now let us see how these agents act; let us endeavour to estimate their relative value in cases such as we are now treating of; and let us begin with *dilatation*. As a certain portion of water will dribble away, no violent means are necessary; neither is it imperative that the obstacle should be overcome at once. You must, therefore, be content to try mild means. The common plan is to pass a bougie to the part and insinuate it into the stricture, but as this is often not practicable, much unnecessary poking follows, and the evil may in this way be rather increased than lessened. You have been accustomed to see me pursue a different course, and I need hardly say, that I think it a better one. In two of the cases you have just seen, the strictures were so narrow that the smallest sized elastic gum instrument did not penetrate into them; still you see that one of the patients can himself already pass a No. 10 bougie into the bladder, and I trust the other will be able to do so in a fortnight. In all these cases I use a moderate sized instrument: I pass it down to the contracted point, and I direct the patient to keep it firmly in contact with the stricture for an hour, if he can bear it without much discomfort; if not, for a shorter time. In some cases, by the end of an hour, the instrument will pass on to the bladder; in others it has to be repeated three, four, five, or six times before the obstacle is passed: there are cases where even a longer time may be necessary, but usually, if properly done, half a dozen sittings will enable you to get through the majority of cases. When your instrument has passed through the stricture the remaining treatment is usually easy, but there are certain things to be borne in mind: do not be in

too much haste, do not introduce the instrument too frequently, do not enlarge the canal too quickly. You may find the urethra become too sensible to allow of your going on, many days may pass before you can prudently use it again, and when you do you will find the parts resuming their former state.

Some persons regard the bougie as a *curative* agent in stricture, under ordinary circumstances. I do not think so, I always recommend a patient who has suffered from permanent stricture, and whose urethra has been made free by dilatation, to watch narrowly the size of the stream of water, and even though he may not observe that it is lessening, he will do well to pass a bougie himself, from time to time, to assure himself that the canal is kept free. The frequency with which it should be done must depend upon the case; one man will find it necessary to do it once a week or oftener; another will let one or more months pass without finding the introduction of a bougie necessary.

As to the treatment by dilatation, it is certain that bougies may be used with less pain and danger than any other agent we can employ; they adapt themselves more easily to the curvatures, and excite less irritation, than metallic instruments, and the good is gradually achieved. The important question, at last, is this; do they merely act like a wedge, simply pushing the sides of the canal apart, and flattening any projections which may be found there? or do they cause the entire removal of the morbid product which constituted the stricture, so as to leave the parts in a natural state? I cannot doubt that, occasionally, a perfect cure is accomplished by the use of bougies; but it is difficult to say what was the exact condition of the parts in those particular cases. It is a notorious fact that, commonly, a permanent cure is not effected, and that the necessity for occasionally passing a bougie remains. I come, therefore, to the conclusion that the pressure of a bougie is, in a large proportion of cases, insufficient to procure the removal of the indurated matter causing the obstruction. Still, when dilatation is discreetly employed, the relapses are much less frequent than when it is imprudently employed. It is unwise to dilate too rapidly; whenever you do so, the return of the trouble is prompt also. You may, in the course of forty-eight hours, pass a No. 12 bougie into the urethra, which, two days before, would not admit a No. 2. This mode of proceeding is objectionable for two reasons: you are treating the urethra as an inert canal, you may induce in it very troublesome inflammation, and by the end of a week you may be prevented from proceeding further, and in another week the evil may be more serious than when the treatment was commenced: the indurated matter was not absorbed, but only put aside. The prudent plan I conceive to be what you see employed here. Do not irritate the part by poking against the stricture a small bougie, which at last will perhaps not penetrate, and may make matters worse. Introduce a moderate sized bougie, keep it firmly and equably supported against the obstruction, let it remain there as large a portion of an hour as it can be borne without incon-

venience. If it will not pass on by that time, remove it; and if the urethra be in a quiet state, you may repeat the operation on the morrow, always letting the instrument remain in the canal as much as a quarter of an hour if there be no discomfort; if the patient complain of tenderness, you may let one, two, or more days pass before you subject your patient to a second attempt. In this way you proceed until the instrument passes on; you then gradually enlarge your instrument; and you must be guided as to the frequency of the introduction by the state of the canal. If the treatment can be borne every day, there is no reason why it should not be followed up; if the sensibility be excited, you may do it every second or third day. When the canal is dilated sufficiently, you then lengthen the interval; at first you make it a week, then a fortnight, a month, or even longer; but ultimately the period of introducing the instrument must depend upon the tendency to contraction which may be manifested. You should, when the canal is free, teach a patient (unless you fear to trust him) to pass the bougie himself. If he be a private patient he will find it can be passed most easily before he gets up in the morning. So much I may say, that the relapses after the treatment of bougies are more manageable than those which follow cauterisation or scarification.

Again and again *cauterisation* has been proposed as *the* means of curing stricture of the urethra; still, at the present moment, it is little used in this country. This must be owing to one of the following circumstances:—Either the application of the remedy is difficult, the inconveniences attending upon its use are real and established, or the cure is not permanent. Many different caustic substances have been used, but at present it is upon the nitrate of silver and the caustic potash that most reliance is placed. Whatever caustic is used, the intention with which it is usually employed is to destroy the indurated matter which constitutes the obstacle.

Then, again, as to the mode of applying it; by some it has been sought to bring it in contact with the interior surface of the stricture; others have been content to apply it upon the anterior surface. We will now inquire, first, as to the practicability or prudence of *destroying* the morbid product; secondly, into the *mode* by which the caustic can be best employed; thirdly, whether, when used, *the cure is permanent.*

It is now a well ascertained fact, that the mucous surface itself is not much changed at the contracted point; that the indurated product is fairly and altogether outside of the mucous surface, very much limited to the submucous tissue, but continuous with the adherent portion of the mucous tissue. Now if that be, as I believe it to be, a well-established fact, it follows that, if destruction be carried out to the extent intended, there must be complete destruction of the entire thickness of the mucous membrane. In that case I apprehend a cicatrix would follow, which would occasion a contraction much more difficult to overcome than that to which it has succeeded. Although I by no means deny that the whole thickness of a mucous

membrane may be destroyed by caustic, yet it is much less easily accomplished than may at first sight seem possible. I have many times applied lunar caustic upon the mucous membrane of the vagina, but I have never destroyed the membrane by it so as to get a cicatrix.

If you apply it again and again to the mucous membrane of the cheek, you will find you make very little progress ; and I apprehend that, in the common run of cases in which caustic is applied to the urethra, the continuity of mucous membrane is not destroyed ; the morbid product outside of it cannot therefore be destroyed. Eschars are no doubt formed and thrown off, but they make little impression upon the membrane of the urethra. It is unquestionably true that in twenty-four hours, or even much less, after the application of caustic, the patient may make water better than he did before the operation ; but this is not because a part of the obstacle has been removed, for by that time the eschar is not come away, but because the morbid sensibility of the part is for the moment extinguished, and the urine passes over the point without exciting the parts to contract. I apprehend, therefore, that, in the majority of cases, the improvement which is often observed is owing much more to the extinction of irritability than to the destruction of the tissue. At the same time, a dilating instrument, a bougie on the one hand, a porte-caustique on the other, is kept steadily in contact with the part, and in the end the obstacle is passed.

For a long time caustic was applied to the anterior part of the stricture by means of the armed bougie : and when we know that it has been applied to a single stricture as many as two hundred times, we may readily admit how little destruction of tissue must follow each application. In all cases it is likely to act on the healthy tissue, and to cause accidents, among which tumefaction, threatening retention and hæmorrhage, were not the least frequent. The evils of this plan were long felt : at last it was proposed to avoid them by carrying the caustic fairly within the stricture, and applying it there, as it were from within outwards. From this method of applying the caustic much was expected ; its action was to be confined to the morbid growth, and when the first eschar was thrown off, the opening was to be enlarged by so much. The objection to this plan is, that if you have to treat a close stricture, you cannot get your caustic into it ; you must first enlarge the opening by bougies before you can use the caustic ; and when so much has been done by bougies, it may be said why not go on with them ?

Now let me say a few words on the relative advantages of dilatation and cauterisation. There was a time when I felt a strong conviction that caustic was the most certain curative agent in the treatment of stricture; a longer experience has satisfied me that that conviction was not well founded. I believe we know no means of effecting a permanent cure of advanced cases of stricture, but I think the best means we possess is the prudent employment of dilatation. You can always make the canal free by this means ; and although it will commonly manifest a tendency to contract anew, yet

the occasional introduction of a bougie may prevent this disposition from proceeding so far as to cause inconvenience. I do not doubt the cures that have been attributed to caustic; but in my opinion they have been mainly owing to the dilatation exercised by bougies and porte-caustiques employed in the treatment. I apprehend the good derived from the use of caustic is owing to the modification of the sensibility of the canal, which has allowed of a more unreserved use of dilating bodies than could have been had without it. It is possible that the irritation of the caustic may do something towards exciting the absorption of the morbid product, and that which the bougie could not do alone might be effected by such an association. Still it must be admitted that, whether each plan be used alone, or whether they be employed in combination, the tendency to contract anew is commonly observed, and is best arrested by the occasional use of the bougie.

[The preceding remarks are made with reference to those cases where the stricture is not complete: in other cases, however, the stricture is so great as to cause complete retention of urine, when the pressure and irration are very serious; the posterior part of the canal, that behind the stricture, may become dilated even to the size of an intestine; and indeed it has been proposed in such cases when there is complete retention, and when no instrument can be passed along the urethra into the bladder, to puncture the urethra at this point instead of puncturing the bladder.]

When the urethra becomes thus dilated, the neck of the bladder loses its power, and the urine will then dribble away through the stricture: the mucous membrane suffers; it becomes affected with chronic or subacute inflammation, and may give way so as to allow of the escape of a small quantity of urine into the cellular tissue, in which violent inflammation is quickly set up; but it almost always determines in sloughing of the cellular tissue, with which the urine gets in contact, and most serious mischief ensues. If the quantity of urine which escapes be considerable, it may infiltrate a great extent of cellular tissue, even passing to the inguinal and inferior abdominal region. In these cases a knowledge of the anatomy of the aponeurosis or fascia of the perineal region enables you to determine the probable point of the urethra which has given way, and also guides you as to the depth of your incisions to facilitate the discharge of the extravasated fluid; for in all such cases the first point is to get rid of the irritating fluid, and this can only be done by giving it the utmost possible facility for escape. In some cases, where the quantity of urine which has escaped into the cellular tissue is small, the symptoms and the consequences are much less serious: a few drops only have passed; inflammatory action may be set up around, so as to form a kind of sac, and prevent further infiltration. After a time the patient may direct your attention to a small, pretty well-defined tumour in the perineum; you puncture it, and a little pus mixed with urine escapes. The cavity being lined by a membrane some-

thing like that of an ordinary canal, the opening manifests no disposition to close, and a very little urine may pass along it whenever the patient tries to empty the bladder. In many cases it will close when the urethra is restored to its proper size ; in others it obstinately remains open. In all such cases there is reason to fear that a certain portion of urine will pass along this fistulous canal at each attempt to make water ; and to prevent this either a catheter must be introduced whenever the patient desires to make water, or the instrument must be retained for some time—until, indeed, we have reason to think the accidental canal is closed. In some cases the constant presence of an instrument cannot be borne ; and, indeed, it tends to keep up irritation in the fistulous canal : if this be so, it may be that the patient will be less irritated by introducing the instrument whenever he wants to make water. Even when no urine passes along the fistula, it sometimes resists all attempts to induce it to close.

In advanced cases of stricture the bladder does not long escape. The contained urine is expelled by a very attenuated stream, and the bladder is not emptied because the contraction cannot be maintained long enough to expel the whole ; the desire to make water becomes more and more frequent, but the quantity passed is lessened. The muscular fibres of the bladder, so incessantly called into action, increase in size, and the cavity becomes smaller. The evacuation being at each effort incomplete—the composition of urine undergoing a corresponding change, becomes more and more acrid—it irritates the mucous membrane, and induces a secretion from it, which is deposited as the urine cools ; and in aggravated cases it may amount to half or two-thirds of the whole of the fluid evacuated, but it does not adhere to the vessels. If the urine be alkaline, the deposit becomes ropy, and clings closely to the containing vessel. You have seen several cases in which the deposit presented this appearance.

After a time the irritation may extend to the ureters and the kidneys. In some cases, in consequence of the constant state of distension of the bladder, the ureters become greatly dilated ; the pelvis of the kidney may participate in this dilatation, and the kidney is not long proof against the consequent irritation. It becomes greatly congested ; heavy lumbar pain is experienced ; and abscess, or other complication, may be the consequence.

Med. Gazette, Dec. 1, 1843, *p.* 259. *& Dec.* 15, *p.* 321.

81.—EFFECTS OF CHLORIDE OF ZINC, AND CHLORIDE OF LEAD IN CANCER.

By E. W. Tuson, Esq., F.R.S., Surgeon to the Middlesex Hospital

During the progress of my investigation of cancerous diseases my attention has been directed in many cases to the effects of certain preparations of chlorine, either in arresting the progress of this ma-

lignant disorder, or having a powerful influence over it ; and this has induced me to employ various combinations of chlorine in their treatment. The results (from time to time) will be brought before the public, and although the use of a paste made with chloride of zinc and flour, as an external application in an ulcerated state of cancer, is well known, I am induced to believe the profession are not so well acquainted with the administration of this remedy internally, and also with the effect of chloride of lead, and that the following cases may prove interesting to some of my readers.

Case 1.—Anne Scammel, ætat. 39, a cook, was admitted into the Middlesex Hospital, under my care Nov. 12, 1839, with an extensive cancerous disease of the right breast and neck occupying the space between the lower border of the inferior maxillary bone and the under part of the pectoralis major, and from the sternum internally to the whole of the superior extremity on the outer side, so that the disease involved nearly one-sixth part of the body. She stated that the glands in the arm-pit first became enlarged, and she fancied the swelling arose from cold, about three years previously ; that it had gradually increased since, affecting at first the breast, producing great tumefaction, and afterwards the whole arm, which became so much swollen that she could scarcely use it or bring it to her side. An irregular ulcer extended from below the nipple towards the axilla, its surface being superficial, and its edges hard. The whole of the parts enlarged were very firm ; pressure with the finger on the arm or back of the hand produced little or no indentation. The glands below the jaw and above the clavicle were greatly enlarged and the general hardness in the neck was so considerable that the clavicle could only be distinguished by a very diligent examination. The treatment consisted of dressing the ulcerated surface with the white precipitate ointment, and she was ordered to take a pill three times a day, composed of five grains of extract of hemlock and one of opium, and a night draught of tincture of opium, in camphor mixture. This plan was continued with little variation for about two months, without any beneficial effects either to the ulcer or the disease, which increased, and appeared of a very malignant character. The swelling of the arm continued, notwithstanding the use of flannel rollers. In Jan. 1840, a paste was directed to be applied to the ulcerated surface, made of one part of chloride of zinc, and three of flour ; this was well mixed and moistened with water, and then applied over the whole of the ulcerated parts. The first application was ineffectual, so that it was used again, when also it was resolved to give the chloride of zinc internally. Half a grain was ordered every morning in a wine glassful of carraway water to be taken after breakfast. A lotion was directed to be applied to all the hardened parts, made of one drachm of chloride of zinc to a pint of water. The application of the paste a second time produced great pain for four or five hours, when a slough was formed, which separated with the assistance of a poultice, and afterwards the ulcerated surface healed kindly. The swelling in the arm gradually subsided, the breast

diminished considerably, and that side of the neck assumed a more natural appearance. In a month from this time the case had completely changed its character. The arm was now of its natural size; the breast was soft, as also the neck, and every part of the superior extremity. In several places there were small tubercles, some of the size of a pea, others a little larger; some were irregular, others smooth and circumscribed: there were six or eight at different places over the mammary gland, one or two in the neck, and one in the arm between the deltoid muscle and pectoralis major; they appeared to be enlarged lymphatic glands. The disease had now changed its character, and assumed the cancerous tuberculated form. The wound had completely healed. The medicine was continued for upwards of two months, the dose being increased to three-quarters of a grain. She complained of the draught being very unpleasant, tasting like metal, and leaving a roughness in the mouth for some time afterwards; one morning she took it before her breakfast, when it made her very ill and uncomfortable, causing severe spasmodic pains in the stomach; she was desired never to take the draught on an empty stomach, but to continue it regularly after breakfast. At the early part of April further improvement had taken place in this patient; the disease had been allayed to a considerable extent; she suffered no pain, felt in good health, and all tokens of disease had disappeared with the exception of the little spots. The arm, the breast, and that side of the neck, were in the same natural state as on the opposite side; she slept well, enjoyed her diet, walked daily out in the garden, and when any inquiry was made as to the state of her health she expressed herself confident that in another month she would be able to leave the hospital quite cured. Few people who had seen her at her admission would have believed she was the same patient, such a change having been effected by the medicine. This favourable change lasted only a short time; at the end of April the mouth and gums became sore, so much so, as to cause the medicine to be discontinued. Soon afterwards the arm began to swell again, and the breast became tender and painful. An ulcer appeared at another part of the mammary gland, which was healed by the application of the paste, when other ulcers were formed, which also healed by the same means, until at last the paste lost its influence, and the disease made rapid progress in spite of all remedies. Morphine and opium gave her a few hours sleep, but the cancer progressed, and she died on the 7th of Jan., 1841.

This case illustrates the peculiar effect of the chloride of zinc in this cancerous disease, its influence upon the system, affecting the mouth and gums; and further observation may show some other effect of this preparation. It cannot be doubted that its external use is beneficial in healing open cancer, which I have succeeded in doing four or five times successively in several cases; and this should induce us to watch its effects, administered internally, in diseases of this character. A solution of one drachm to a pint of water injected upon a cancerous ulcer, or applied with linen rags, will be found a

very useful application. Other preparations of chlorine have an influence over cancerous affections—chloride of lime; chloride of lead; ter-chloride of carbon ; perchloride of copper, &c. ; and a case has been described to me of a lady completely healing a large open cancer by the application of common salt (chloride of sodium). From my observations on the effects produced by the exhibition of various combinations of chlorine, I am persuaded they have a very powerful influence over cancerous diseases ; and I fully intend to investigate this subject, to combine two or more of these preparations, as well as to employ other new chlorides (which I have ready) internally ; for it must be confessed by all conversant with the nature of these diseases, and with the pathological appearances seen in most cases, that they can only be counteracted by affecting the system, and thus acting on the constitution generally, and not by local application alone. Should, hereafter, a cure be found out for these inveterate diseases, it must be by internal agents, counteracting some peculiarity in the system, permitting certain parts to be affected by this disease, or some morbid defect in the nervous system, so that the natural and healthy structure of the component parts of the animal texture are no longer preserved, but sink into this peculiar state of disease. The nature of cancer and its structure generally has been fully studied during a long period, and at present little useful knowledge as regards the treatment of the disease has resulted from the investigation, either by entering into its first formation, growth, or chemical composition. In forty cases I have noticed a trifling point (which may be fallacious, however) ; inquiry was made in respect to the diet of the patients, and whether they were in the habit of eating salt meat, or taking much salt at their meals, and the reply was (with the exception of one lady) that they disliked salt meat, and took very little salt. This led me to investigate the nature of the blood in several cases, to ascertain whether there were any chemical deficiency in the saline agents of this fluid, and on one occasion I thought some useful conclusion might be adduced ; but upon a further and more elaborate investigation my hopes were blighted in a great measure on this point. The following case is interesting, inasmuch as it will exemplify the beneficial effect of another preparation of chlorine in cancerous affections :—

Case 2.—Mary Bradley, ætat. 42, was admitted into the Middlesex Hospital under my care Feb. 14, 1843, with a large, irregular, open cancer of the right breast, extending deeply into the axilla, so that the pulsation of the vessels could be seen, with a foul, yellow, excavated surface, copious discharge, with much fetor and severe pain. She stated that two years and nine months previously Sir A. Cooper had removed a scirrhous tumour : after the operation the wound nearly healed, but broke out again into an ulcerated state a fortnight afterward ; only the scirrhous swelling was removed. The rest of the breast with the nipple was left.

Feb. 15.—*(Extract from note-book.)*—The ulcerated surface extends deeply in the axilla down to the vessels, and over a large

surface, from the centre of the sternum, to and below the axilla; it presents a very unhealthy appearance, with dark, excavated spots at various parts, the fetor very great, and the discharge considerable. The following lotion was ordered to be applied with linen rags constantly kept wet:—

℞ *Chloride of lead*, one drachm;
Water, a pint.

17. The surface of the cancer has a more healthy granulated appearance, more so in some parts than in others; the pain, she states, is less at the lower part, but much the same at the upper.

21. The surface appears more healthy; the granulations are red, and the edges of the ulcer have the appearance of healing; the pain is less. The following draught to be taken three times a-day:—

℞ *Chloride of potassium*, ten grains, in carraway-water.

24. The whole surface has much improved; complains of very queer sensations in the head, with loss of memory, and a dulness all over the head and eyes. Omit the draught.

March 13. The whole surface of the ulcer has become much better, and the edges are cicatrising slowly; she suffers less pain, and the fetor has ceased.

28. The ulcer in the centre has much the same appearance; the edges are not so well; small ulcerated spots, of the size of a pin's-head, have been formed; they seem to extend deep, and the thin membrane at parts has become absorbed. She was ordered to take *liq. chlorini*, ℥i; water ℥iss, three times a day.

31. The ulceration is about the same, with the exception of the edges; the small ulcers have increased, and some have acquired the size of a small pea; they are deep, and contain a thick, white discharge. The lotion of chloride of lead to be discontinued, and the following one used:—

℞ *Chloride of zinc*, ℥j;
Water, ℥x. Make a lotion.

She said the medicine did not agree with her. It was ordered to be discontinued.

April 4. She has been using the lotion continually since our last visit; the ulcerated surface has the same appearance. The application caused no pain nor inconvenience.

7. Remains much the same; perhaps at parts the ulcerated surface has a more healthy appearance. The lotion to be increased to double the former strength.

11. The ulcerated parts have a more healthy appearance at some places, and the edges are better; the spots have diminished in size and depth. The lotion still causes no pain; she says she remains much about the same.

June 2. The ulcerated surface has been bleeding several times; the former application was employed on each occasion with success; she is very low, and complains of her chest and cough. Comp. squill draught three times a day.

9. The whole surface has a more unhealthy appearance, and

altogether the patient is worse in every respect; she is very low and restless; bleeding not so frequent. She was ordered wine and a little brandy with an egg; to go on with the draught.

16. The ulcerated surface appears more unhealthy; it has sloughed at small places, and bled a little several times; the wound has extended deeply into the axilla. From this time the patient gradually got worse, had great difficulty in breathing, no doubt from effusion of serum in the cavity of the thorax; the ulcerated surface bled several times, the muriated tincture of iron always stopped it; and she died on the 30th of June, having been in the hospital four months and a fortnight. No post-mortem examination was allowed to be made.

Remarks.—In this case the effects produced by the chloride of lead and the effort of nature to assist in the removal of the disease by the ulcer filling up and healing at the edges, were most striking. The disease having again an ascendancy over the system, destroying the edges at several parts, the patient being relieved from pain by the application, and life prolonged, were remarkable. Little doubt can be entertained that had not the application been used, bleeding would have taken place sooner from the ulcerated surface near the axilla, which would have been fatal at the time; or she would have died from exhaustion, as the vessels at her admission were distinctly seen in the arm-pits. The chloride of lead has been very extensively used in many cases of disease of the breast and uterus in the form both of lotion and ointment, with much success; it appears to act upon the nerves, paralysing them, and thus producing ease. One young patient used an ointment made with one drachm of the chloride of lead to an ounce of common cerate, rubbing it over the breast and armpit; it produced a complete numbness of the arm, and relieved the pain: the ointment was discontinued, and the numbness subsided in the arm: it was still used over the breast, and the patient was cured. This ointment will be found of most use in hysterical affections of the breast, or nervous irritability of its gland, and also in other cases, particularly when any tumour presses on or involves a nervous filament, and thus produces constant pain; the ointment applied upon the course of the nerve, over the situation of the pain, will give ease; it is also of much use in allaying inflammation, and it forms another valuable remedy in the treatment of these diseases.

Lancet, Jan. 13, 1844, *p.* 502.

82.—TREATMENT OF SCALP DISEASE.

In a discussion at one of the meetings of the Westminster Medical Society, the President stated that, during a late visit to Brussels he had gone over the hospital of that city, and had been informed by M. Sauterne that he had found one of the most effectual remedies for scald-head, ring-worm, &c., to be an ointment, the chief in-

gredient of which was wood-soot. The common soot of the chimney was collected, placed in a quantity of water, and macerated by a gentle heat for four days,—the fluid was then strained and evaporated in an open vessel to the consistence of treacle. An equal proportion of this and common lard, or unguent, were mixed together, and applied to the affected part night and morning. The head was shaved as often as necessary, and washed thoroughly every third day. The active principle of the ointment was probably creasote.

Mr. Snow remarked that the curative effects of the ointment were probably dependent on the creasote and a small quantity of pyroligneous acid which it contained. He had somewhere read of the pyroligneous acid having been applied with success in cases of tinea capitis. Mr. M'Intyre, of Newcastle-upon-Tyne, had many years since used the tar-ointment with great benefit in various scalp affections.

Dr. Sayer believed that much of the curative efficacy of this ointment depended on the daily washing of the affected parts with the soft soap of the country, which contained much more alkali than ours did. When he was in Brussels, twenty-nine years since, the nurses washed the heads of the patients regularly every morning. The ointment then employed, and which he was still in the habit of using with the most decided good results, consisted of equal parts of charcoal, so burnt as to retain its pyroligneous acid, nitrate of potash, and common brimstone, worked up with hog's-lard into an unguent, and applied night and morning. In addition to the daily washing, the head was shaved every fourth day. This ointment was mentioned in the "Pathology" of Pinel as efficacious in tinea capitis.

Mr. Fisher said that in Christ's Hospital the ring-worm was treated with an ointment containing five grains of the bichloride of mercury to an ounce of lard.

Mr. Hancock attributed the great difficulty of eradicating ring-worm and other contagious scalp diseases, when they affected a great number, to the indiscriminate mixture of the persons, the continued use of the same cap or hat, and the placing different persons in the same bed on different occasions. He stated that he had been requested to go to an union workhouse in Sussex, in which above sixty of the children were affected with ring-worm. Every kind of means had been used for its removal without effect. He ordered the children to be separated by being placed in various cottages about the neighbourhood; a complete cure followed.

Lancet, Nov. 25, 1843, *p.* 275.

33.—*On the best position in Fractures of the Forearm.*—[A good deal of discussion has lately arisen on this subject among several practical surgeons, each defending his own position. One gentleman, Dr. Chadwick, prefers the supine position, and advances as his reason that the biceps rotates the upper portion of the radius outwards in fracture of that bone below the tubercle, and says our

practice should be to follow the position of the upper portion in effecting reduction by rotating the inferior portion outwards also; or by supinating the hand, and preserving that position until union is effected; and this plan he recommends from practical experience. Another gentleman "Semisupinus," tells us to place the limb in a position between pronation and supination, and his principal reason (for he advances many) is the irksomeness to the patient of the prone position. A third, Mr. Rodick, observes, "The biceps cannot rotate the radius outwards, for it is in a state of positive relaxation, and, granting it its full active influence, if the fracture occur below the insertion of the pronator radii teres, the latter muscle will be more than a match for the former," &c.

Mr. T. O'Connor, of March, remarks on this subject that he would recommend the following experiment to be tried by any surgeon in the next case that may be brought before him, of fracture of the radius above the styloid process, and below the insertion of the pronator radii teres.]

Grasp the radius above the fracture, and rotate inwards, and, while in that position, relax the hold of the bone, it will be rotated outwards with a jerk. Is that phenomenon the result of a relaxed or passive state of the biceps? My own opinion is, that it is caused by the action of the biceps and supinator radii brevis. Of seven cases of fractures of radius treated by me within the last year, two were treated on the semisupine, and five on the supine plan; in every instance the fracture was immediately above the styloid process, commonly called Colles's fracture. In the two treated on the semisupine plan, rotatory motion was in a slight degree impaired, and that notwithstanding the full employment of the means usually recommended to preserve the interosseous space. The instruments which I used to press the soft parts into the space, were two circular pieces of wood, each about an inch in circumference, enveloped in common wadding, and extending anteriorly and posteriorly from elbow to wrist, kept in situ by a moderately tight bandage—the fracture, of course, previously reduced—the same instruments were employed in the five cases treated on the supine plan, and with a result so highly satisfactory, that I am fully resolved to treat fracture of the forearm on no other plan whatever.

Prov. Med. J. Nov. 18, 1843, *p.* 131.

34.—*Case of Spina Bifida successfully treated by repeated Punctures.* By A. H. Stevens, M.D., New York.—[The tumour in this case was seated over the upper part of the sacrum, about three inches and a half broad from side to side. The covering of the tumour was not healthy skin but a peculiar thin membrane of a reddish colour, traversed by numerous vessels like varicose capillary veins. The child was eight months old.]

In the operation to-day, Oct. 17, the tumour was punctured with an iris knife, and about four ounces of clear serum, tinged with a few drops of blood, issued from the puncture in the integuments. The child did not appear to suffer any inconvenience from the evacuation of serum, but it produced a slight sinking at the anterior fontanelle. The child's general health is good. There did not appear to be any deficiency of bone about the outer portion of the base of the tumour. The healthy integument mounted a few lines above the base, before giving place to the peculiar envelope above noticed.

20. The tumour was again tapped on the right side. Not more than an ounce of serum escaped.

21. The tumour was again punctured in three places along its lower edge on the verge of the sound skin. About four ounces of serum escaped without any bad symptoms. The tumour is now somewhat shrivelled, but the diminution does not appear equal to the amount of fluid evacuated.

30. The fluid continued to ooze slowly for nearly twenty-four hours after the last punctures. Since that period, the child has been drooping and fretful, with some febrile symptoms, perhaps partly owing to her teeth. Recently, the sac of the tumour has become inflamed; and within two days, the child has been observed to keep her left leg drawn up, and to cry when it is disturbed. She has taken little or no medicine, excepting a slight dose of magnesia. The tumour is kept wet with a spirit-lotion. The anterior fontanelle is considerably depressed.

The tumour was not punctured afterwards. The febrile symptoms and spasm of the muscles, soon subsided, and in a few days the little patient returned with her parents to the country. At a second visit to the city in the spring, or summer following, the child was again presented to us for examination. The sac of water had disappeared, and all that remained of it was a small bunch of indurated and corrugated integument.—*New York Journal of Medicine* for Sept, 1843.

Prov. Med. J. Nov. 18, 1843, *p.* 139.

35.—*On the Arch-tourniquet.*—[Dr. Oke, of Southampton, has caused to be constructed an arch-tourniquet on a somewhat novel plan.]

It consists of an arch, a pad, and screw. The flanks of the arch are perforated with holes for the action of the external screw, which is worked by a short handle, as in the common tourniquet.

The pad is of the ordinary size, flat on one side and convex on the other. Upon its flat surface there is a smooth cavity for the reception and working of the point of the screw.

Mode of application:—Let the arch embrace the limb, so that one of the perforations of the flank may be exactly opposite the cavity on the flat side of the pad, previously applied over the trunk of the artery to be compressed. Then fit the external into the internal screw, and work it upon the pad till sufficient pressure be made to stop the circulation of the artery.

By this simple means any of the principal arterial trunks of the extremities may be compressed in the shortest possible time without strangulating the circumference of the limb and obscuring the operation with venous blood.

The arch is prevented from slipping by the pressure of the screw upon the pad.

The instrument is made of yew, in a very primitive manner, by a common mechanic of Southampton.

Mr. Weiss, in whose possession it now is, has promised to submit it to some of the London surgeons, and, should it be approved, to construct it in brass or steel. When it shall have been thus improved by his well known ingenuity, it will have a much neater and lighter appearance.

Prov. Med. Journal, Nov. 25, 1843, *p.* 151.

86.—*Excision of Internal Piles.*—If the surgeon is determined to excise internal piles, the only safe way of doing so is as follows:—When the tumour is protruded, the base of it should be transfixed by a long needle, which will prevent it from returning into the anus. Then it may be cut off; and the cut surface being exposed to the air, will not bleed so profusely; or if it does, it is easy to apply cold, astringents, or ligatures.—*Mr. Druitt.*

Prov. Med. Journal, Dec. 23, 1843, *p.* 230.

87.—*On Aneurism of the Aorta.*—[In a very interesting paper on this subject, Dr. Law draws the following inferences:—]

When aneurism arises from the posterior part of the aorta we generally want the evidence of a palpable tumour to indicate the disease.

When the tumour is resisted in its development by unyielding structures (as is the case when it arises from the posterior part of the aorta), it produces in these structures changes giving rise to peculiar symptoms, especially to a peculiar character of pain, which, if not exclusively confined to this disease, exists so much more frequently in it than in any other, as to be enough at all times to awaken a suspicion of aneurism. However obscure all other symptoms of aneurism of the aorta, apart the existence of a palpable tumour, may be, still it rarely happens that there are not some, which, added to the existence of the particular pain, may not suffice to make up what this latter may want of an exclusive pathognomonic sign of the disease.

If this pain be connected with the lower dorsal and lumbar vertebræ, and depend upon abdominal aneurism, there will be, according to our constant experience, a bruit de soufflet in the course of the artery.

If the pain be connected with the upper or thoracic dorsal vertebræ, and be owing to aneurism, it seldom occurs that there is not some difficulty in deglutition, or some obstruction in the respiratory

apparatus, either affecting the trachea, and so weakening the respiration in both lungs, or exercised upon either one bronchus or upon one lung, and so producing a difference in the relative form of the respiration in the two lungs. In the absence of the bruit de soufflet (which we have almost always found absent in thoracic aneurism, except where the valves of the aorta were involved in the disease), some one of these symptoms will generally be present to confirm the value of the pains.

The character of the pain consists in a constant, aching, boring sensation, and a sharp, lancinating pain.

To relieve the agonizing pain of aneurism, there is scarcely a limit to the amount to which we may exhibit opium, without producing narcotism.

In the treatment of aneurism, low diet should be avoided, as lessening the prospect of a radical cure of the disease, and as increasing a nervous irritability, — the constant accompaniment of it.

The interval between the fatal termination and the bursting of an aneurism is various, and is much influenced by the importance of the organs which the hæmorrhage may affect. If it burst into the pericardium, and compress the heart, such interval will, of course, be shorter than if it compress a less vital organ. If there have been an adhesion between the laminæ of the pericardium the effusion will be more gradual, and therefore the interval will be longer than if no such adhesion existed, as we have proved by experience. The suddenness of the fatal termination would seem to be in proportion to the extent and suddenness of the hæmorrhage, and the importance of the organ or organs, whose function may be mechanically interfered with by the effused blood.

Dublin Journal of Medical Science, May, 1844, *p.* 285.

88.—*Case of a Needle entering the Right Breast, and finally lodging in the Heart.*—[A curious case of this description is related in the "Philadelphia Medical Examiner." The needle was accidentally pushed into the right breast on the 4th of August, 1842, but could not be detected. On the 8th September she had pleurisy of the right side, and recovered in three weeks. On the 13th Feb., 1843, she had a slight attack of pneumonia, and on the 10th March she had spasms of the diaphragm; and on the 26th March obstinate vomiting. On the 5th of April she began to have pain in the heart, which increased, together with other symptoms of cardiac disease, till her death on the 27th of April, nearly nine months after the needle had entered her body.]

The heart was small and flaccid, containing only small coagula. On opening the left ventricle the point of a needle was seen protruding a quarter of an inch towards the middle of the cavity. The needle had passed at the under surface of the heart about three-quarters of an inch from its apex, and half an inch from the septum,

through the wall of the right ventricle, through a columna carnea, through the septum and into the left ventricle. It was fifteen lines in length ; its head, somewhat incrusted, was imbedded in the wall of the right ventricle, just under the surface of the pericardium. The orifice made by the needle seemed to have been completely closed by coagulable lymph ; but it would be very easy for a small channel to escape detection in such a mass. The internal membranes of the heart were smooth and shining, without any marks of inflammation ; all the large vessels were in excellent condition.

Although the patient could never point to the situation of the needle, and was always unconscious of its presence in any particular part, yet, during my attendance, I never doubted that it was the cause of all her ailments. I presume it first lodged obliquely in the intercostal muscles, or was made to do so by her own attempts to discover its situation ; it then passed through the pleura, and probably a portion of the lung, reaching the floor of the diaphragm ; it then seems to have moved near the œsophagus, irritating some filaments of the par vagum ; and finally, it reached the heart.

Medical Gazette, Jan. 5, 1844, *p.* 462.

89.—*Suggestions for the Improvement of the Rhinoplastic Operation.* By William Keith, M.D., surgeon to the Royal Infirmary, Aberdeen. [It often happens that when a lost nose is restored by this operation, it becomes a skinny, shrivelled appendage, and out of all proportion, small. This may be owing to the circumstance that when union of the transplanted portion has taken place, the connecting slip between the nose flap and the forehead is divided. This proceeding would cause inadequate nourishment to be communicated to the new nose, which would only be kept alive by the new vessels that inosculated in the cicatrix all round : whereas if the connecting slip were allowed to remain for a much longer time than is often done, it would assist materially in keeping up the life and vigour of the transplanted nose. This proceeding was adopted by Dr. Keith in the following case of Donald Mackenzie, aged 17, whose nose had been completely lost from the destructive ravages of lupus.]

October 27. Pared the edge of the nasal opening ; raised a large flap previously marked out, and very much of the shape of the ace of spades, from the forehead, leaving the point attached at the root of the nose, by a thick strip fully one-third of an inch in breadth. Having waited until all bleeding had ceased, the flap was brought down by twisting the connecting strip, and secured by two stitches of the interrupted suture on each side, to the edges of the cheeks. Supporting the alæ by dossils of lint dipped in oil, made the edges of the void left in the forehead to approximate in some degree by the help of one stitch, and covered the whole with warm water dressing and oiled silk. The temperature of the closet to be kept at 72° of Fahr. Thick gruel to drink as his only food.

October 28, 8 A.M. He has passed a good night ; very little oozing from the wounds ; temperature of the flap almost natural ; colour

bluish; pulse 72; tongue clean and moist; bowels slow. 8 P.M. Complains of general uneasiness; pulse 84, hard; tongue dry.

℞. Chloridi hydrargyri, gr. v; pulveris opii, gr. j; confectionis aromaticæ, q. s. M ft. pilula statim sumenda.

℞. Misturæ salinæ, ℥x; vini ipecacuanhæ, ℥ij; solutionis muriatis morphiæ, ℥ss, M ft. mistura. Capiat cochleare magnum omni horâ.

℞. Olei ricini, ℥vj; aquæ cassiæ, ℥j. M ft. haustus, cras mane sumendus.

October 29, 12 noon. He slept comfortably, perspired freely, and has had a copious evacuation of his bowels; pulse 80, softer; tongue clean and more moist; nose still bluish, but warm. 8 P.M. Feels quite easy now; pulse 76, and soft; tongue moist; bowels twice moved since noon; nose quite warm, and nearly of the same colour as the face.

October 30, 12 noon. He passed the night comfortably; pulse 76; tongue rather dry, but no urgent thirst; bowels moved sparingly this morning; the new nose looking very natural, and preserving its temperature; removed the plugs from the opening into the nose; withdrew all the stitches; found adhesion of the nose perfect throughout; it maintained its firmness and prominence without the aid of a plug; the wound in the forehead much contracted, and filled with effused lymph, almost to the level of the surrounding skin; slight erythema on one cheek. The cheek to be smeared with white oxide of zinc ointment, as the exciting cause seems to be the purulent discharge dropping on it from the wound in the forehead. 8 P.M. Cool and comfortable; pulse 72; bowels have moved twice; the eruption on the face already gone.

October 31. Was restless last night; pulse 72; skin soft; tongue rather dry; bowels open, but stool dark-coloured. To have a blue and a rhubarb pill at bed-time.

November 1, 10 A.M. In the early part of the night, the right flap of the nose became detached, which circumstance made him nervous, and has hindered him from getting sleep; he feels well however; pulse 60; bowels freely opened; the circulation seems very languid in the nose to-day; it comes out on inquiry that the fire had gone out, and the night being intensly cold, had so chilled his nose, that it has not even yet recovered its heat. Hot water dressing to be diligently applied. Two ounces of wine allowed. 8 P.M. The temperature of the body has been quite natural through the afternoon, as also the colour and temperature of the new nose; pulse 72; rawed the edge of the right ala and corresponding cheek, and took a fresh stitch of them to each other.

November 2, 12 noon. He has passed a good night; nose warm, and of a healthy colour; pulse 72; bowels open; feels well. Repeat the wine.

November 4. Going on well; pulse 60; wound on the forehead granulating vigorously. Three ounces of port-wine allowed daily.

November 6. Two-thirds of the whole extent of the new nose

firmly adherent to the parts adjacent, so as to bear pulling with impunity, but the right ala still unattached; the opposing edges are, however, suppurating kindly, and beginning to granulate; the granulations on the forehead quite prominent. The wound to be dressed with sulphate of zinc lotion. Wine continued, and full diet allowed.

November 8. Removed the stitch from the right side of the nose which was inserted on the 1st current, and found that union had taken place.

November 16. The nose was firmly adherent to the face; and the wound on the forehead was entirely skinned over.

November 19. Proceeded to establish a columna nasi. Took a slip a quarter of an inch broad from the centre line of the upper lip, and through all its thickness rawed the lower end, and also the inside of the tip of the new nose, and having turned up the slip into the line of the column, there fixed it by a lady's sewing needle passed through the point of the nose. The upper lip was then treated as is usual in hare-lip; the edges neatly approximated, were kept *in situ* by two fine needles and the twisted suture. Union took place speedily in both the nose and the lip. The appearance of the mouth being much improved by the upper lip—previously too long—having been shortened, and the column at first looking rather bulky, contracted to a very suitable size as the cicatrized surfaces firmed. A small extent of the twisted slip of the flap between the eye-brows remained detached from the subjacent surface, but a few days' dressing with blistering ointment, brought both surfaces into a granulating state, after which entire union speedily took place. He soon after left the hospital sound and well.

In conclusion, I would suggest the propriety of performing such operations in summer, when less risk would be incurred from variations of temperature; the frost on the night of the 1st of November proved all but fatal to the nose in the above case.

Lond. and Ed. M. J. of M. S., Feb., 1844, *p.* 113.

90.—*On Prussic Acid in Opacity of the Cornea.*—By G. K. W. Patersone, Esq..—[We certainly have not that confidence in this remedy which some surgeons have; but Mr. Patersone makes such a positive statement as to its powers in remedying opacity of the cornea, and gives cases to confirm this opinion, that we think it right once more to refer to it. Mr. P. relates the following case.]

May 16, 1843.—Thomas Galloway, æt. 23, weaver, of a strumous diathesis. About eight months ago had an attack of inflammation in both eyes, to relieve which went to an hospital, and remained under treatment for about six months, without being benefited, further than getting rid of the pain and redness. At present both corneæ are occupied with opacities nearly in the centre, and almost covering the whole expanse of the pupil, which renders him unable to read, or follow his usual employment. Had the vapour applied to both eyes

daily, for the space of seven weeks ; at the end of which, he could read a good type, and was also able to pursue his occupation.

I may state, also, that I have applied the vapour in two cases of amaurosis, along with the ordinary remedies in this disease, with considerable success.

In concluding these brief statements, purely with a view to make known to the profession the results of it in my hands, I cannot forbear expressing a strong belief, that, when cautiously and gradually applied, much good, as has already been done by the vapour of prussic acid in several forms of blindness, will yet be effected, and I doubt not for a moment to find it ere long ranking as a remedy of considerable efficacy in some of the more formidable diseases of the eye.

Med. Gazette, May 15, 1844, *p.* 808.

91.—*Cyanide of Zinc in ulcers and opacities of the cornea.*—M. Carrier believes that preparations of hydrocyanic acid have great efficacy in causing cicatrisation of ulcers of the cornea and absorption of opacities. The compound which he prefers is the cyanide of zinc, made into an ointment, in the proportion of 1 to 25 of lard.

Prov. Med. J., Feb. 10, 1844, *p.* 378.

92.—*Hæmorrhage after Amputation.*—Mr. Jesse, of Manchester, mentions in the *Prov. Med. Journ.*, two cases of venous hæmorrhage occurring immediately after the arteries had been tied, from obstruction to the venous circulation by the retraction of the fascia or integument, a free incision through which caused an instant cessation of the loss of blood.

Medical Times, Feb. 10, 1844, *p.* 333.

93.—*Chloride of Zinc in Toothache.*—According to Dr. Stanelli, the chloride of zinc, liquified by exposure to the air, possesses the property of calming dental pains.

His mode of application is most simple. By means of a small hair pencil, a small quantity of it is applied to the cavity of the painful tooth, and in the space of a few minutes it appeases the most acute sufferings, without causing any irritation.

Before proceeding to the application, it is indispensable carefully to surround the tooth with cotton wadding, and, when the chloride has been applied, to well fill the cavity with this same cotton. The mouth is finally washed with a little warm water.

The author affirms that he has obtained uniform success from this means in more than fifty cases, and that he has never observed the progress of the caries rendered more active by it.—*Annali Universali de Medicina ;* and *Chemist.*

Med. Gazette, Feb. 16, 1844, *p.* 672.

94.—*On the cure of Nævi by Croton Oil.*—M. Lafarque states his method of curing nævi, by inoculating with croton oil, as follows :—

Five or six punctures should be made on and around the tumour, with a lancet dipped in the oil, just as in vaccination. Each of the punctures causes immediately a pimple, which in thirty-six hours is developed into a little boil. These boils unite, and form a red, hot, painful tumour, covered with white crusts, and resembling a small carbuncle. Two days afterwards the scabs separate, and in lieu of the nævus is seen an ulcer, which is to be treated on general principles. It would be dangerous to make more than six punctures on a very young infant, as the irritation and fever are considerable.

Prov. Med. J., Feb. 17, 1844, *p.* 393.

95—*Scrofulous Diseases of the Testis.*—Mr. Curling's account of the symptoms of scrofulous disease of the testis is in our judgment the very best we have met with; superior, we think in minute accuracy and fidelity to that of Sir B. Brodie, which is the next best we are acquainted with. On this account, and also because we have not yet given any connecting examples of Mr. Curling's manner of describing disease, we insert the following quotation:

"The disease commences insidiously, and is insidious in its progress. The patient's attention is usually first attracted by a slight uneasiness in some part of the gland, generally the epidydimis, which on examination is found to be somewhat enlarged, prominent, and hardened. Sometimes the whole organ feels slightly enlarged and indurated, though it more frequently forms a tumour with an unequal and irregular surface. The state of the testis, however, is often marked by small local effusions of fluid in the tunica vaginalis, the surfaces of this membrane being partially adherent. Very little pain is experienced in the part, and there is but slight tenderness on pressure. After the disease has lasted for some time, many months or even a year and more, making little progress, and often remaining stationary, one of the prominences begins to increase so as to be observed externally, and to feel painful and tender; the skin over it becomes adherent, changes to a livid hue, ulcerates and bursts, giving vent to a soft caseous matter mixed with pus. This is followed by the formation of a fistulous sinus, which discharges a scanty thin serous pus, mixed with particles of tubular matter and often with semen, particularly after venereal excitement. Similar changes may take place in other parts of the testis, occasioning two or more sinuses leading to the interior of the gland. These sinuses sometimes communicate, and they may continue open and discharging for a great length of time. After the deposit has all come away, if the original disease be arrested, and no more tubercular matter formed, reparative changes sometimes take place; the discharge ceases, the fistulæ close up, leaving the organ more or less diminished in size or entirely wasted, according to the extent to which it had been disorganized by the tubercular deposit. The bursting of the abscess and escape of the tubercular matter are sometimes followed by a hernial protrusion of the testis, as after chronic inflammation of the gland."

The directions for the treatment are judicious and practical. Mr. Curling says nothing of the use of the liquor potassæ which Sir B. Brodie has found more useful than anything. We mention this the rather that we have derived singular benefit from the use of this medicine not only in this affection, but generally in cases of external tubercular disease; but it must be given in large doses, gradually augmented to sixty or eighty drops three times a day if possible. We feel satisfied (though well aware how difficult it is to fairly estimate the therapeutic influence of remedies in chronic diseases) that this medicine, given as freely as the case will allow, in combination with the iodide of potassium, effects greatly more than the latter medicine will accomplish by itself.

Brit. and For. Med. Review, Jan. 1844, *p.* 82.

96.—*Treatment of Mercurial Sore Mouth.*—There are few accidents more provoking to the young practitioner than the not uncommon, undesired, and unexpected supervention of profuse salivation during the exhibition of mercury. We fear all the comfort we can give him in such a case is contained in the following extract from Dr. Watson's lectures:—

"You will constantly be called upon to do something for the relief of this disease (for so we must call it), which you yourselves, or some of your brethren, have with the best intentions inflicted. I have tried all sorts of expedients; and I have asked a great number of my friends what is the best plan to adopt in such cases; but I never could get much satisfactory information from them. Some thought purging was the best thing. Others recommended alum gargles, or gargles made with the chloride of soda; and these last certainly have one good effect, that of correcting the fetor. A dilute solution of chlorine in water, much used at the Middlesex Hospital, is better still. Others believed that sulphur, which has long been prescribed in such emergencies, was really of service; and some advised that the patient should be as much as possible in the open air; a few commended iodine. All admitted that they knew of no certain remedy. Neither do I. But there are two or three expedients which I am confident are often of very great use in checking the violence of the salivation, and in removing the most distressing of its accompaniments. If there be much external swelling, treat the case as being, what it really is, a case of *local inflammation;* apply eight or ten leeches beneath the edges of the jaw bones, and wrap a soft poultice round the neck, into which the orifices made by the leeches may bleed; and I can promise you that, in nine cases out of ten, you will receive the thanks of your patient for the great comfort this measure has afforded him. Pure tannin, moistened and smeared upon the spongy gums, is remarkably efficacious in rendering them firmer and more comfortable. But this is not always to be procured; and when the flow of saliva, and the soreness of the gums, formed the chief part of the grievance, I have found nothing more

generally useful than a gargle made of brandy-and-water, in the proportion of one part of brandy to four or five of water. This last piece of practice I learned from the present apothecary to the Middlesex Hospital; I have tried it over and over again, and I tell it to you as a thing worth remembering. These little points are by no means to be despised. A very fashionable and successful physician, now dead, used sometimes to say when he met others of his brethren in consultation, 'It is all very well to speculate about the exact situation and the precise nature of the disorder, but the question with me is, "what is good for this, that, or t'other thing?"' A wise physician will seek to combine with an accurate knowledge of disease and settled principles of treatment, those practical expedients and minor appliances which are picked up by casual experience; which could never have been reasoned out, and which sometimes constituted nearly all that we can do for our patient's benefit."

Brit. and For. M. Rev. Jan., 1844, *p.* 125.

97.—*Prevention of the Contagion of Syphilis.*—The problem of the means of extinguishing syphilitic contagion, appears to have been solved at the hospitals at St. Petersburgh. In principle, it appears simple enough, the point to be effected being merely to prevent the absorption of muco-purulent matter, either by means of washings, which remove it directly, or by liquids, such as the chloride of lime, which have the property either of decomposing it, or of preventing otherwise its inoculation. In practice, however, it proves a matter of great difficulty, especially in the female. In St. Petersburgh, the most satisfactory results are said to have followed the use of the prophylactic soap of Dr. Pfeffer. The active ingredients of this soap appear to be—in 500 grains of the substance, six grains of bichloride of mercury, four of tannin, and forty-five of chloride of lime, incorporated into a soap with soda.—*Annales de Thérapeutique, November*, 1843.

Lond. and Ed. M. J. of M. S., March, 1844, *p.* 252.

98.—*Tracheotomy in the last stage of Croup.*—At the sitting of the Academy of Sciences on the 8th of January, M Scoutetten, Professor at the military hospital of instruction at Strasburgh, read a case of tracheotomy performed with success in the last stage of croup. He performed the operation on his own daughter, an infant six weeks old, to save her from imminent death.

The operation was successful. According to M. Scoutetten, it is the only instance of tracheotomy performed on account of croup on an infant of this age; and the only one in which such alarming symptoms lasted so long. He is of opinion that this case ought to encourage the timid, and show the surprising resources of nature at this tender age.

Med. Gazette, March 1, 1844, *p.* 750.

99.—*Treatment of Erectile Tumours of the Eyelids.*—By M. Carron du Villards. A little girl, fourteen years of age, had presented, since her birth, on the upper eyelid, an erectile tumour, about the size of a grain of coffee. The tumour was of a livid red colour, increased daily, and was excessively tense when the child cried. M. Carron du Villards inoculated the tumour and its circumference with vaccine virus, traversing it with a thread impregnated with the vaccine matter. On the fifth day, the symptoms of inoculation manifested themselves. Five pustules appeared around the tumour, which itself became inflamed. On the tenth day it was covered by a black crust, which came off on the twentieth, leaving a healthy, rosy surface underneath. All traces of the erectile tumour had disappeared.

A child, nine years of age, had borne, since its infancy, an erectile tumour in the external angle of the eye. The tumour had never increased in size until the child was attacked with scarlatina. Its increase from that time was so rapid as to alarm the parents, who applied to M. Carron du Villards. Three entomological pins were fixed in the tumour, and their extremities having been bound together with a little silver wire, were exposed to the flame of a wax candle. The tumour became swollen, cracked, and then sank. On withdrawing the pins they brought away a portion of its parenchyma. Eight days afterwards the child was cured.

A pretty young woman, of Versailles, had an erectile tumour, of the size of a pea, on the superior eyelid. After an attack of scarlatina, it became endowed with increased vitality, and appeared ready to burst every time she coughed. In six weeks it acquired the size of an olive. M. Carron du Villards having been then consulted by her family, determined to operate by the coagulating method. The tumour was injected, by means of Anel's syringe, with a styptic solution. It became black, and then faded. On the fourth day it was surrounded by an inflammatory circle, and covered by small phlyctenæ. The fifth day a portion of it separated, and the rest dried up. On the eighth day the entire crust fell off, leaving underneath a rosy, new skin, similar to that of a cicatrised blister, without loss of substance or deformity.

Lancet, April 27, 1844, *p.* 158.

100.—*Extraction of Foreign Bodies from the Ear.*—[On this subject Mr. Chitty Clendon offers some ingenious suggestions as to the formation of the particular kind of forceps required. He says—]

In the cases I have referred to, it appeared to me that the difficulty was increased by the unsuitable form of the instruments employed. In many of them the extremities of the blades were *flat* on the grasping surfaces, and so thick and clumsy that it was difficult, even if it were possible, to introduce them between the walls of the cavity and the substance to be removed; and in all of them the *width* of the blades increased towards the joint; the external orifice consequently pressed on them, and closed the instrument by the time it

reached the substance, and every attempt to grasp it rendered the difficulty still greater, by pushing it further into the passage.

As I have given some attention to the construction of tooth-forceps, I thought I could plan an instrument which would entirely obviate the difficulties I have enumerated. The forceps I have had made for this purpose pass freely into the ear, until they meet the opposing substance, and then, on opening the handles, the slightly concave extremities act as dilators, and will securely grasp a substance which has previously choked up the passage ; while the blades at the orifice diminish, rather than increase in width, even when open to the full extent. This instrument has been seen by Sir Benjamin Brodie, who was much pleased with it, and requested to retain it, in order to have one made for his own use. It is equally well adapted to grasp a pea, a cherry-stone, or piece of slate pencil, substances most frequently introduced by children, as large masses of indurated wax ; and I think it would also be found useful in removing small polypi from the nares.

Lancet, March 16, 1844, *p.* 824.

101.—*Artificial Pupil made in the superior Eyelid.*—In a case of contraction of the orbicular muscle of the eyelid, which had resisted every remedy, even the twice repeated section of the muscular fibres, M. Gerold resorted to the following operation, which he has been the first to propose and to execute. After introducing a small flat piece of wood, well oiled, underneath the superior eyelid, exactly opposite the pupil of the eye, he made a crucial incision, which completely divided the skin, the muscle, and the mucous membrane. The external skin was then dissected off the four flaps thus formed, and the mucous surface was turned outwards, and fastened to the base of the flaps, so that the mucous membrane formed the circumference of the artificial opening. No accident supervened, and vision was restored ; the patient wore spectacles as a precautionary measure.

Such intractable cases as the above are of very rare occurrence ; still the operation of M. Gerold, which is a most ingenious one, is a valuable addition to science. It may likewise be resorted to in cases of partial or complete paralysis of the third pair, with prolapsus of the superior palbebra. The longitudinal section of the eyelid, which has been proposed in such cases, is evidently a much more objectionable operation ; it interferes more with the contraction of the orbicular muscles, exposes a greater extent of the eye to the external atmosphere, and consequently renders the inflammation, which usually follows such exposure, as in paralysis of the seventh pair, much more probable.—*Annales Belges d'Oculistique.*

Lancet, March 23, 1844, *p.* 9.

102.—*Diagnosis of Fractures of the lower end of the Radius.*—By Edward F. Lonsdale, Esq. [Mr. Lonsdale thinks there are one or two points connected with fractures of the lower end of the radius, which deserve more attention than has hitherto been paid to them,

as diagnostic symptoms of this particular kind of injury. He refers to the prominent ulna, and peculiar displacement of the hand. He says]

When the radius is fractured within its lower inch, or inch and a half, by a fall on the hand, it will be found that, in the majority of cases, the following deformity exists :—The whole hand appears to be displaced laterally outwards, or in a state of abduction ; that is to say, the ulnar edge of it, instead of being in a line with the ulna itself, occupies a position more external, or towards the radius, which causes the end of the ulna to project, and to be apparently dislocated. There is also generally found to be a depression on the opposite side, in the radius itself, in the situation of the fracture ; and there is not unfrequently a prominence posteriorly above the carpus, when the displacement has taken place in this direction as well. The crepitus is not often present in these cases, for the fractured surfaces are so tightly locked together, that motion between them is seldom obtained.

The explanation of the above position of the hand no doubt is the following. When a person falls on the hand with sufficient violence to fracture the radius, the force, after it has produced the fracture, tells upon the lower portion of bone, and pushes it inwards towards the ulna, at the same time that it must take the wrist and hand with it, owing to its mode of connection with the carpus. The ulnar edge of the hand then loses its normal position with the ulna, causing the end of this bone to stand out in so prominent and decided a manner. It is to these two latter symptoms that I attach so much importance, as being diagnostic of this particular kind of fracture ; for I believe that in every case of injury about the wrist, from a fall upon the hand (whether in old or young people, though more frequently in the former), where there are found to be *this peculiar prominence of the ulna, and lateral displacement of the hand*, it may safely be said, that the lower end of the radius has been fractured, without the necessity of taking any other symptoms to help the diagnosis, even if no deformity is to be felt about the radius itself, or other part of the joint. I have come to the above conclusion after close observation and much attention to the subject, and believe them to be *sure diagnostic symptoms* of fracture of the lower end of the radius.

Medical Gazette, Dec. 29, 1843, *p.* 407.

103.—*On Gangrene of the Face.*—By Henry Obre, Esq., late assistant surgeon to the St. Marylebone Infirmary.—[The object of this communication is not so much to bring forward any thing novel in its description as to recommend the following mode of treatment for this formidable disease.]

If the patient do not sink from previous disease, it advances rapidly until it destroys the external integument. In this state there is a remedy which has produced the most decided benefit. I allude

to the application of the actual cautery. It has been used in this disease by Baron Isnard, and was named to me by Dr. Hennis Green, at whose recommendation I have repeatedly used it with marked benefit. The application of a red-hot iron to the face appears a formidable measure; but it may be done without producing pain. When I have used it the patients did not appear conscious of its application. A flat piece of steel being introduced along the side of the tongue to defend it, the heated iron is to be well applied over the entire gangrenous parts. When any spot has been left untouched, the gangrene, when arrested in other parts, will at this point advance. After the cautery has been used a yeast poultice may be applied. In a day or two the slough is thrown off, when granulation and contraction of the wound soon take place. In exemplification of the benefit of this remedy, I will narrate two cases where it produced decided advantage, and in which it immediately arrested the disease. In one the mortification was the sequela of fever, in the other of one of the exanthemata, which will be sufficient, the other cases being treated similarly.

The subject of the first case was a boy, nine years of age, living in an unhealthy situation, who suffered an attack of typhus, and was treated with bark and wine. When sufficiently recovered to sit up in bed, an ulceration of an ash-colour was perceived on the external and back part of the gum of the upper maxilla. It had increased to such an extent, before being discovered, that the first two molar teeth were loosened, and soon fell out. Nitric acid was applied, the ulceration soon passed to the mucous membrane of the cheek, which was hard, swollen, and of a glazed appearance. In a day or two the ulceration passed through the cheek to the size of a half-crown piece. It presented a gangrenous appearance, and was very offensive. The hands required to be restrained to prevent his destroying a poultice of yeast which was applied. Although in this state, he sat up in bed and ate animal food. The strides of the disease were now alarming, advancing to the commissure of the mouth in front, and passing back to within an inch of the tragus. The parents having consented, the actual cautery was applied to the external diseased parts with little or no uneasiness to the child. For a week its progress was perfectly arrested, when it began to increase under the integuments.

The edges of the sore were irregular and everted, the internal parts of the mouth quite exposed, (from the wound,) with the superior maxilla as high as the zygoma. Being fearful that the lower eyelid would be destroyed, as the disease was extending in that direction, the cautery was repeated with the same success as previously, the slough soon came away, and granulations superseded; at times the double teeth on that side fell out. From this time the wound gradually improved, contracting by cicatrisation, and the boy eventually but slowly, perfectly recovered, as will be seen by the cast which I made two years after his recovery. He is, however, unable to open the mouth to a greater extent than a quarter of an inch,

in consequence of adhesion of the cheek to the gum on the diseased side, which inconvenience I am desirous of removing by the knife.

The second case was a girl, aged three years, who had always lived in large towns. Her diet was chiefly vegetable, seldom taking animal food, in consequence of the poverty of the parents. When convalescent from measles (for which she had no medicinal treatment) the mother was surprised to see a black mark on the chin, which soon became ulcerated. The following day it destroyed the surrounding parts. I now visited her for the first time. She was lying on her back, apparently suffering little or no pain; the covering of the lower jaw, anterior to the insertion of the masseter, is quite destroyed, except a narrow communication joining the angles of the mouth ; the exposed bone beginning to decay ; the integument surrounding the disease is pale, tumid, and hardened ; fœtor most offensive ; pulse 108 ; tongue covered with a brown fur ; in other respects natural. Wine and quinine were administered internally, and nitric acid applied to the diseased surface, but it did not arrest its progress ; the gangrene increasing, destroyed the communication between the angles of the mouth, separated the base of the tongue from the bone, passed down nearly to the *os hyoides*, exposing the submaxillary gland, and all the teeth of the lower jaw fell out, while those of the upper continued perfect; the actual cautery was applied over the diseased parts on the external surface, and chlorine cloths laid over after. On the following day a most decided improvement was to be seen. Where the iron had been applied, the disease had not extended; but on the inside of the mouth, where it could not be used, it continued to spread for two or three days, when the child died exhausted. The appearance of the face after death is tolerably well represented by a wax cast, which was taken after death; but it does not at all represent the appearance the poor child had.

These cases will be sufficient for my object. Others I could also narrate, were it necessary, to establish the benefit of the actual cautery in this disease. In the first case a complete cure was obtained; in the second the child died, but the cautery completely arrested mortification at the parts to which it was applied, and would probably have been attended with the same success as in the first case, if it had been employed under equally favourable circumstances.

I am not aware that the actual cautery has been used in this country in the treatment of *gangrœna oris*, although most of our writers on the subject recommend it on the testimony of Baron Isnard and Margolin. It is evidently a powerful agent, and is worthy of trial in that form of disease, which, according to Dr. Willis, destroys nineteen out of twenty of those attacked.

Ed. Med. and S. J., Jan., 1844, *p.* 105.

104.—*Opium in Hernia.* [The following case by Mr. J. M. Walker, of Newcastle-on-Tyne, shows the good effect of opium in hernia.]

I was sent for at 10 P.M. on the 24th inst. to visit R. H. aged 45, a stout, muscular man, suffering under strangulated scrotal hernia in the right side. He had been trying for an hour to reduce it, having done so frequently before, but now he informed me it was a great deal larger. He was vomiting, and complained on the least pressure. In consequence of the extreme tenderness I did not persevere in the taxis, but decided on putting him under the influence of opium. I gave him two grains every fifteen minutes, until he had taken six grains, and to use hot fomentations. Shortly after the first pill the vomiting ceased; and when I visited him again at half-past 12 P.M. I found them preparing to come and stop my visit, as he had got relief. I found him, as he said, exceedingly comfortable; it was quite evident he was enjoying all the luxury of an opium eater. Upon inquiry, he told me had not touched the swelling, but that it had gone away of its own accord.

Med. Gazette, Jan. 12, 1844, *p.* 484.

105.—*On the Treatment of Cartilaginous Bodies in Joints.*—On this subject, Mr. Liston in his lectures on the diseases of the joints says, as regards the management of cartilaginous bodies in joints, it is often absolutely necessary to free the patient from the annoyance they occasion. After they become loose they are apt, from time to time, to slip betwixt the bones, to cause great pain, and seriously to impede progression. They do occasionally form a bed for themselves, and cause little or no uneasiness after a while; but this is the exception. It was the custom years ago to remove these bodies by incision, and this was contrived in such a way that the opening through the skin did not correspond with that in the capsule. The skin was drawn aside, opened, and the body cut upon. After its escape, the integument being let loose, resumed its place, and was then put carefully together. Union often took place, and if the joint was kept quiet, the patient recovered without further risk. But, again, if the wound did not unite, and suppuration was established in its track, inflammation of the joint and disorganisation of the tissues composing it not unfrequently happened. The limb was thus put in jeopardy, and sometimes also the patient's life. Another and improved mode of proceeding was proposed some years ago by Dr. Goyraud of Aix, and at the same period by Mr. Syme of Edinburgh. This plan I have pursued in several cases with excellent success. It consists in subcutaneous division of the capsule of the joint, and the lodgment of the cartilaginous body in the cellular tissue. The proceeding is not unattended with difficulty, and it is one which a person not accustomed to undertake operative procedures will be exceedingly apt to fail in. The fixing of the mass is often not an easy matter. It may, moreover, escape into the joint during the incisions. The position of the cartilage being secured as well as possible, the

small instrument—a needle-like knife—is introduced at a distance from it; the capsule being then cut to the requisite extent, the body is thrust or pulled out and lodged in the cellular tissue, in a space previously prepared for it. There it will generally remain without causing the slightest annoyance. In a case which was lately under my care either five or six of these cartilaginous masses were thus removed from the joint as they became loose and troublesome. Two of them were ultimately removed by incision of the skin, one necessarily on account of diffuse infiltration and formation of matter. The others now lie under the skin comfortably enough.

Lancet, Dec. 2, 1843, *p.* 283.

106.—The caustic "Vienna paste" is made with five parts of lime and six of pure potash mixed together with alcohol.

Lancet, Dec. 23, 1843, *p.* 407.

107.—*Treatment of Hernia Humoralis or Gonorrhœal Orchitis by Opium.*—In the reports of cases of this description under Mr. Gay in the Royal Free Hospital, London, we find that the gonorrhœal inflammation of the testicles and appendages were speedily and completely cured, by purgatives and opium. Hyoscyamus has been given with equally good effects. The full and free purgation was always necessary before giving the opium. Fifteen minims of laudanum may be given every four hours, and the previous purgative may be composed of five grains of calomel with 25 grains of Jalap, or a strong black draught.

Lancet, Jan. 6, 1844, *p.* 484.

108.—*On the Operation for Hare-lip.*—Simple as this operation generally is, there is some variety of opinion as to the period of life at which it ought to be performed. Mr. Ferguson's opinion is, that under all circumstances, the best period is immediately after suckling, provided the patient appears in good health, and does not seem to suffer from teething. Here, as in all other cases about to be subjected to operation, it is the duty of the surgeon to examine as to the state of the system generally, and such being satisfactory, he imagines that there is no safer opportunity than that referred to. Some, however, have urged that a later age should be selected, while others have chosen an earlier; of the two, he prefers the latter, although, indeed, it seems to be, in the generality of cases, more a matter of choice as to will or convenience, when the proceeding should be done; for, usually, it is a very safe operation at all periods of life. He gives preference to the early age, as the patient is then more manageable, and he states that he had experienced most trouble with those about eight years old, as the struggles of the sufferers were then more difficult of control. At a later age, again, the parties are usually very desirous to submit to the surgeon, and have sufficient command over themselves to keep perfectly steady.

Lancet, Jan. 6, 1844, *p.* 482.

109.—*Use of Acupuncture for the Consolidation of Fracture.*—A young man, aged 26, of a strong constitution, fractured the two bones of the forearm; the fracture was simple.

The surgeon who attended him, perceiving that, at the end of five weeks after the accident, reunion had not taken place, applied afresh the apparatus, and ordered absolute repose for the limb for four weeks longer. This time having elapsed, M. Wiesel observed that the fragments of bone still preserved their mobility, and he then determined to have recourse to acupuncture, which he performed in the following manner:—

He introduced, between the two moveable fragments of the ulna, two needles, sufficiently long to traverse the false articulation from side to side, and kept the needles in that position for the six following days, after which he withdrew them, because they had excited, by their presence, a considerable swelling of the part, and severe pain.

M. Wiesel, fifteen days afterwards, traversed in the same manner the false articulation of the radius, with two other needles, which, at the end of a few days, caused sharp pain, and a slight suppuration. He then applied a simple bandage to the limb, and in the space of six weeks a complete consolidation took place.

This case is no less interesting for its success than for the simplicity of the means adopted. It proves that, in cases of false articulation, the surgeon, before employing the seton or removing the ends of the bone, has a method to try, very simple and innocent, and which, in some cases at least, has been attended with most advantageous results.—*Giornale per servire ai progressi, and Gazette des Hop.*

Prov. Med. Journal, Feb. 3, 1844, *p.* 360.

110.—*Method of causing immediate Vesication.*—This method, which M. Deaucq proposes to call *blistering by the watch-glass*, is effected as follows:—Drop into a flattish watch-glass eight or ten drops of the strongest liquor ammoniæ; cover the liquid with a piece of linen, its diameter rather less than that of the glass; apply the glass containing the linen to the skin, previously shaved, and keep it in its place by moderate pressure with the fingers. As soon as a red zone can be perceived round the glass, we may be certain that the vesication is completed; in most cases thirty seconds are sufficient to obtain this result. There only remains then to remove the apparatus, wash the part, and take off, with dissecting forceps, the epidermis, which comes off easily, and in one flake. The subsequent dressing may be varied according to circumstances, whether counter-irritation or the endermic administration of medicines be the object.

Prov. Med. Journal, Feb. 3, 1844, *p.* 360.

111.—*On the Removal of Uterine Polypi.*—Dr. Quackenbush, of Albany, U. S., publishes a case of uterine polypus, in removing

which he uses an instrument somewhat different from that in common use in this country. He describes it as follows:—]

The instrument I used consists of three small rods, one-eighth of an inch in diameter, eight inches in length, and perfectly straight. Two of the rods have each a small hole at one end, large enough to admit the ligature. The other rod has a slip at one end, large enough to allow the first two rods to pass, and at the other end a shoulder, around which the ligature is to be fastened.

The instrument is to be applied in the following manner:—The two rods armed with the ligature, are placed side by side, and guided by the finger, are to be passed up the vagina along the polypus, till their upper ends reach that part of the stalk, round which the ligature is to be applied. Then the rods are to be separated and moved quite round the polypus, so that a portion of the ligature will encircle the stalk: now the loop of the third rod is to be slipped over the other two, by which means they are drawn together; which being effected, the two rods are to be withdrawn, and the ends of the ligature with them.

You now fasten the ligature around the shoulder of the rod, and leave nothing in the vagina but the simple rod.

Such is the instrument I wish to introduce, and which, I think, possesses three advantages over the ones generally used.

1st. It is much more simple and easily constructed.

2d. It is much more readily applied; and

3d. It is much smaller, and will consequently cause much less irritation during its application.

American Journal of Medical Sciences, January, 1844, *p.* 243.

112.—*Treatment of Bunion.*—Mr. Humpage recommends that the bunion be kept constantly covered with lint dipped in warm water, this being well defended also by oiled silk. The best mode of applying the latter is to cut a strip about half an inch in width, and three or four inches long, turning it round the affected member. The lint should be changed night and morning, and any hardened cuticle should be gradually peeled off. When matters are improved, the continued application of the lint will not be necessary, but the oiled silk should be constantly worn, to prevent a return of the disturbance.

Medical Times, Feb. 10, 1844, *p.* 333.

113.—*Treatment of Gangrenous Intestine in Hernia.*—In a case of hernia, published by Dr. Paul, of Elgin, in which the operation was deferred too long, by the refusal of the patient to submit to it, the different tissues were so thickened from inflammatory action, that it was with much difficulty that the bowel was exposed, and it was then found to be completely gangrenous. The peritoneum was so adherent to the bowel, that on separating them by the most careful dissection, the bowel burst. The opening in the intestine was made sufficiently large, and a warm poultice was then applied to the

wound. So soon as the patient rallied from the immediate effects of the operation, epsom salts in small doses were given from time to time, and in the course of the day, the bowels were freely opened by the wound. The stomach was now retentive, and, except the formation of an abscess in the scrotum, every thing went on as favourably as could be wished. The swelling subsided rapidly, and the wound appeared to contract. Little further treatment was required beyond keeping the parts clean, and regulating the bowels when necessary. Some exuberant granulations required to be kept down by caustic. Ten days after, he felt some desire to have a stool by the rectum, and upon making the attempt, he had a copious evacuation. This desire was encouraged by small doses of the sulphate of magnesia, and he continued to have two or three stools per anum daily. The wound now closed up very fast, and very little fæculent matter escaped from it, so that before the end of the thirteenth week, the patient began to walk about wearing a truss. In two weeks more, the wound was entirely closed, and the man resumed his work as a groom.

Dr. Paul has lately seen this young man, who continues in good health; his bowels act naturally and with great ease, seldom requiring the aid of medicine. He wears a truss with a flat pad, which effectually prevents the protrusion of the bowel; but on its removal, there is an immediate bulging out, apparently a good deal from distension of the bowel with air. The portion of intestine originally involved in the hernial tumour is now evidently adherent to the integuments.

London and Ed. M J. of M. S. Jan., 1844, *p.* 41.

114—*New Truss for Hernia.*—[Mr. Francis L'Estrange, of Dublin, has invented a truss which may have some advantages over those generally used, especially in keeping its position, and in being easier to the patient. Its chief value seems to be that the pad is made elastic by means of a spring placed within it, and so arranged that the pressure is chiefly over the internal instead of the external ring. Mr. L'Estrange says—]

An observation of the anatomy of the inguinal canal, with its internal and external rings, points out the internal ring—that into which the contents of a hernia first obtrude themselves—as the spot on which the chief pressure exercised by the truss should be applied, and it is to accomplish this so desirable object, that the peculiarities of my truss are expressly directed. In general form and mode of application, the truss is like those in common use; the peculiarity consists in the application of a second spring in the pad, fixed to the inside of the main spring, and rising in such a manner that while it makes the pad lie flat along the course of the inguinal canal, the chief point of pressure is at its extremity, which corresponds to the internal ring. By this spring, standing thus upwards and backwards along the course of the inguinal canal, not only is the internal ring

closed up and the whole tract pressed upon, but during the rising and falling of the abdominal parietes in the various motions of the body, the pad is made to accommodate itself equably and efficiently everywhere. In the case of ordinary trusses, the pubes and external rings are the chief parts which are made to bear the weight, and the spermatic cord and testicle come in for a share of the injurious effects of such pressure. But, by this instrument, which presses on the space above Poupart's ligament, exclusively, and lies there in virtue of its own intrinsic form, these inconveniences are not at all experienced; and such is the accuracy and steadiness of its hold that even a thigh strap, to keep it in place, is found to be unnecessary. The instrument is altogether divested of this latter incumbrance. And such, too, is the uniformity of the pressure, that if the instrument were to be worn continually, night and day, there is every reason to anticipate in many cases a radical cure of the disease.

Dub. Med. Press, Feb. 21, 1844, *p.* 124,

115.—*The Liquor Potassæ*—given in doses of from 15 to 30 drops, three times a day—is an admirable remedy in many cases of inveterate skin disease. According to our observations, it is far more efficacious, and perhaps, too, less injurious, than the potash in combination with iodine. The liquor potassæ may be given in milk, beer, decoction of sarsaparilla, &c.

With respect to the sulphate of iron as an external application, in sycosis, mentagra, &c. we cannot believe that it possesses any curative virtues above those of the sulphate of zinc, or of the sulphate of copper, that are in daily use. The white vitriol is our favourite; and the best way of applying it is by dipping rags of soft linen in a tepid solution of the salt, and covering these with a piece of oil-skin. If used thus, the lotion will not require renewal oftener than night and morning. In some cases, a little hydrocyanic acid may be conveniently added to the solution with advantage.

Med. Chir. Rev., Jan. 1844, *p.* 238.

116.—*On Wounds of the Intestines.*—By M. Moreau Boutard. The object of this gentleman in these cases is to recommend a method of obtaining direct union in wounds of the intestines; in longitudinal wounds, by approximating the edges of the wound by means of suture; in transverse wounds either by the same method or by invagination. To effect this, the author excises the projecting lip or ring of mucous membrane at the level to which the mucous and serous coats have retracted; the everted mucous membrane, with its epithelium which prevents all union, being thus removed, on bringing the lips of the wound together, serous membrane is in contact with serous membrane, muscle with muscle, and bleeding mucous membrane with the same structure. If invagination is to be practised, the mucous membrane, is scarified and excised to the extent of four or five millimetres in the portion of the intestine which is to be the recipient; and thus the serous surface of the invaginated intes-

tine is placed in contact with a mucous surface reduced to a condition favourable to union. By this method the author obtains rapid union without diminution of the capacity of the intestine or the formation of valves within it; or if invagination is performed, the calibre of the intestine is lessened in a very small degree.—*Gazette Medicale de Paris.*

Dub. Med. Press, Oct. 25, 1844, *p* 359.

117.—*Treatment of Chancre and Bubo.*—By M. Ricord, Paris —"Destroy the primary ulcer as early and as completely as possible;" such is our precept. It is founded upon the following fact, that syphilis is at first a mere local disease, limited to the spot of its manifestation, and giving rise to symptoms of secondary or constitutional infection only after a time.

If that proposition be true, and I would stake my existence upon it, as I have done my professional reputation, it is evident that cauterisation will have as good results as when applied to the bite of a rabid dog, and will prevent further mischief. If false, on the contrary, my proposition can have in its practical application no injurious consequence whatever.

The practice of destroying the chancre at as early a period as possible should be adopted even by those who hold with Dr. Cazenave, that general infection exists before chancre, for, even in their opinion, the local damage of a sore, whose duration or future extension none can foretel, will at any rate be prevented.

It is argued by some, who admit the chancre to be a local disease, that cauterisation may drive the poison into the system. Common sense teaches the folly of such a doctrine, the caustic destroying that very matter, the absorption of which they so much dread.

I have *never* seen a chancre destroyed, during the first week of its existence, afterwards give rise to secondary syphilis; and moreover, a symptom dangerous to the patient himself, and dangerous to others by its contagious nature, has been by this method annihilated.

The caustics I recommend are the nitrate of silver, merely applied to the wound during the first twenty-four hours, but at a later period—the third or fourth day, for instance—kept in contact with it for several minutes; and still better, a disc of "paste of Vienna" (lime five, potash six parts, made into a paste with spirits), spread over the ulcer and its edges. I prefer caustic to excision, praised by Hunter, because it induces in the neighbourhood a degree of inflammatory action, highly favourable to the neutralisation of the ulcer.

If the extent of the sore or its previous duration cause the surgeon to discard all idea of destroying it, it will be well in most cases to uncover the wound, except when for such purpose an incision is necessary. The prepuce should not be dragged forcibly backwards, paraphymosis being a troublesome complication. Cauterisation may be here again used, not to destroy the chancre as before, but to modify its surface; and in some patients you will find a

superficial action of lunar caustic one of the best sedatives of the irritated sore.

During cicatrisation it will again be used at the discretion of the surgeon, to repress exuberant granulations.

Some ulcers remain stationary after rapidly advancing towards cure; but no epithelium forms; the surface remains red, smooth, and varnished over, without receding, it is true, but without progressing towards complete cicatrisation. I have found, in such cases, desiccation very soon produced by the light application of lunar caustic.

During its specific period, chancre should be dressed at least three times a-day, if its suppuration be abundant; during granulation, one dressing in twenty-four hours will suffice. At all times great caution is requisite in removing the lint, in order not to lacerate a tender cicatrix.

All local applications may cure the sore. Amongst them a choice may, however, be made.

Greasy substances in general I do not approve of; they frequently develope irritation around the chancre, and even eczematous eruptions, which, by the breaking of their vesicles, may occasion extensive accidental inoculation.

Common cerate does little good, but seldom is injurious; when to an ounce of it a few grains of extract of opium are added, it frequently calms the local irritation.

The dressing I prefer to all others is lint slightly impregnated with aromatic wine (a decoction of sage, rosemary, thyme, hyssop, mint, &c., in eight times their weight of common red Burgundy). This liquid modifies, as an astringent, the ulcerated surfaces, destroys the inoculable property of their secretion, and *tans* the neighbouring parts, so as to render them harder, and less susceptible of irritation.

I have now and then found benefit from the addition of from one to six per cent. of tannin, or extract of opium, according as my object was to calm or to stimulate the sore.

Should catarrhal inflammation of the parts complete chancre, lotions, with the five-grain solution of nitrate of silver, will be advantageous.

Mercurial ointment I do not approve of in the local treatment. It does not in the least hasten the cure, and not unfrequently gives rise to eczema mercuriale.

Repose and a few baths are requisite; and in most cases, you will find that the local treatment, combined as above, will suffice for the perfect cure of the primary ulcer.

Dr. Serre, of Montpellier, gives unbounded praise to silver internally in the treatment of chancre; but in his cases, the sores having lasted eight or ten weeks, we really cannot see that proof is given of a special action of the drug, inasmuch as the sores might have been spontaneously cured within the same period.

Prov. Med. Journal, Oct. 28, 1843, *p.* 63.

118.—*Treatment of Bubo.*—In mere congestion of the inguinal glands, the tumours may be dispersed. But should absorption of inoculable matter have taken place into the glands, suppuration is, in my opinion, inevitable. Absolute repose, ice, leeches applied around the bubo, are, however, the most advantageous modes of treatment, and may limit, if not dispel, the suppuration. With regard to the application of ice, I may remark that if the bubo diminishes during the first forty-eight hours of the application of cold, it may be persevered in; but if the tumour should not decrease, the ice cannot be continued with safety or utility.

On the first appearance of the swelling compresion is decidedly useful; hence the rare occurrence of bubo on the side on which the patient wears a well-made herniary truss.

A method which has of late years obtained much favor is the blister dressed after denudation of the dermis with a scruple solution of corrosive sublimate. (Malapert and Reynaud.)

When this plan was first spoken of I applied it according to the direction of the inventors to *all buboes*, and found that the average of suppuration was about one-half. Subsequent observation again showed that, when this plan is not followed, *all buboes* being taken into account, one-half certainly escape without suppuration. The advantages of the method consequently sunk in my esteem. The application of bichloride is besides exquisitely painful, and causes in most cases indelible cicatrices. I therefore reject this plan as a general method, and prefer to it the sub-cutaneous division of the glands with a narrow blade.

Mercury, praised by J. Bell and Hunter, influences only those buboes which accompany indurated chancre, and is perhaps inert in all others.

Treatment of the Acute Period.—Absolute repose, leeches, poultices, mercurial ointment, and all the apparatus of antiphlogistic treatment, find here their application. Baths are not constantly of use, and their influence must be carefully watched. As to Malapert's method, although strongly recommended by its inventor, it is, in my opinion, to be altogether set aside at this period.

Indolent Bubo.—The application of leeches in small numbers, repeated at no very distant intervals, constitutes an excellent discutient plan of treatment. Resolutive poultices, with oatmeal, warm bricks, blisters dressed with mercurial ointment and repeatedly applied over the tumour, and compression, should form the basis of the treatment. I use for the purpose of compression a wooden disc covered with leather, and fixed around the abdomen and thigh by means of a long strap and two buckles. The compression should be carried as far it can *without pain*. Discutient frictions, with mercurial or stibiated ointments, and the plaster of *vigo cum mercurio* assist powerfully the cure.

If Malapert's method can ever be employed with reasonable hopes of success, I conceive it is particularly in this form of bubo.

Dr. Malgaigne recommends *crushing* the tumour, a practice which

the vascular and nervous connexions of the bubo should dissuade you from.

The subcutaneous division of the tumour with a narrow bistoury is a method you have frequently seen me adopt. If the tumour is considerable, caustics, and especially the pâte de Vienna, may be resorted to for its destruction.

Suppurated Bubo.—In this form Malapert and Reynaud assert that the tissues become partially thickened from plastic exudation, and that the virulent pus is secreted through the skin by a kind of perspiratory action. I prefer the puncture with a knife, and the operation I perform at an early stage of suppuration.

I open the buboes by a large number of punctures, because it is impossible to assert the virulent or non-virulent nature of the pus before the abscess has been opened. In the first instance it is indifferent to me whether a large or a small opening be made, as a chancrous sore and a deformed cicatrix will inevitably occur; but in the latter, a long incision would leave an indelible trace, which is avoided by making numerous punctures.

Prov. Med. J., Dec. 16, 1843, *p.* 204.

119.—*Mode of Forcing out Collections of Matter from Bony Cavities by Atmospheric Pressure.*—[In a case of collection of pus in the antrum of Highmore, for the evacuation of which the patient would not allow a portion of the bone forming the bottom of the maxillary cavity to be removed, Dr. Buchanan, of Glasgow, adopted the following ingenious contrivance, which, no doubt, might be made use of for other cases of a similar description. A tooth had previously been extracted which communicated with the cavity, but through which the matter would not descend, owing to well known physical principles.]

A blow pipe was procured, having the necessary degree of curvature at its smaller end, and a bladder attached to the other end, which was inflated by the patient. The nozzle of the blow pipe was then introduced into the orifice in the bottom of the maxillary cavity, when, on compressing the bladder, the air ascended to the top of the antrum, and forced the matter downwards into the mouth. By this means about one ounce and a half of fœtid matter was discharged; two ounces were collected, but probably at least half an ounce was saliva. The same operation was repeated morning and evening, and a small quantity of matter obtained for some time after.

London and Edinburgh Monthly Journal of Med. Sci., Dec. 1843, *p.* 1076.

120.—*Useful Hint on the Treatment of Chronic Rheumatism and Neuralgia.*—By Dr. James Johnson. A tea-spoonful of brimstone in a small cupful of milk, taken every night at bed-time for a week or two together, is one of the best of all remedies, that we know of, against old obstinate rheumatic aches, cramp of the legs, the pains

that are connected with a varicose state of the veins, chronic sciatica, &c.

The well-known nostrum—the "Chelsea Pensioner"—that has so long had high repute in chronic rheumatism, is mainly indebted to sulphur for its virtues. It may be worth while to mention its composition. It is made thus :—

℞ Flor. Sulphuris ℥jj.
Pot. Supertartrat. ℥j
P. Guiaci ℥j.
P. Rhei ℥jj.
Spir. Nucis Myristic. ℥ij.
Mellis q. s. ut fiat electuarium.

The dose, one or two drachms every morning and evening.

Med. Chir. Rev., Jan. 1844, *p.* 240.

121.—*Pommade for Chaps and Fissures of the Toes.*—One of the most annoying effects of secondary syphilis is the formation of fissures on the internal surface of the toes: they are usually very painful, are surrounded with a red areola, and secrete a syphilitic matter. In a few cases, gangrene has been known to supervene, and to destroy one toe after another. An ointment, containing litharge, white precipitate, and a few drops of laudanum, has been used with very marked success in such cases, in many of the hospitals of Germany. It is, also, much recommended in the serpiginous and phagedænic ulcers, which occasionally supervene upon vaccination in children of a scrofulous or syphilitic constitution. The process of cicatrisation is often promoted by bathing the sores, at the same time, with a decoction of hemlock and marsh-mallows.

Med. Ch. Rev., Ap. 1844, *p.* 515.

122.—*Anodyne Pommade.*

Take of, Galen's Cerate	31	parts,
Extract of Belladonna	8	——
Acetate of Morphia (previously dissolved)	3	——

Mix well together.

This Pommade is exceedingly useful in cases of muscular pains, chronic rheumatism, &c., when rubbed on the affected parts.

Ibid. p. 515.

MIDWIFERY.

123.—EFFECTS OF ERGOT OF RYE ON THE FŒTUS IN UTERO.

By T. E. Beatty, M.D., M.R.I.A., Fellow of and Professor of Midwifery to the Royal College of Surgeons in Ireland, &c. &c. &c

[Dr. Beatty thinks, with many other very respectable practitioners, that ergot of rye produces a noxious influence on the nervous system of the infant during parturition; and to this effect may be attributed its fatal tendency in many cases, independent of the asphyxia which is evidently produced in other cases by the continued and uninterrupted action of the womb for a certain length of time. Dr. Beatty relates a number of cases, and concludes that in most cases, if the labour be accomplished within *two hours* after the exhibition of the medicine, the bad effects on the child will not be seen: on the contrary, when the time exceeds two hours, the danger to the child will be great. "The effects are certain spasmodic conditions of the muscles of the whole body, alternating with relaxation or palsy, and accompanied by evidences of derangement of the functions of the cerebro-spinal system," produced, according to Dr. Beatty's opinion, by "a direct poisonous effect on the infant before delivery." After relating a number of cases to elucidate his opinions, Dr. Beatty says—]

In the cases just recorded, the condition of the infants was very unlike that of still-born children delivered under ordinary circumstances, and when no ergot had been administered to the mother. *The distinguishing characteristics are, the general lividity of the surface, the universal rigidity of the muscular system, producing the stiffened limbs and clenched hands in those infants in whom life was extinguished; and the remarkable kind of alternating spasm and palsy which supervened in those that were resuscitated.* The nearest approach to this state in new-born children, and that which most resembles it, is the condition in which children are born dead, with symptoms of congestion of the cerebral vessels, in whom, it is true, we find the countenance suffused and livid, but the peculiar affection of the muscular and nervous systems is wanting. Children presenting this appearance of congestion are usually born after difficult labour; but in the instances above detailed this was not the case, some of them were tedious, but none of them difficult.

That the *fœtus in utero* is capable of being influenced by the circulating fluids of the mother, is proved by the well-known fact, of the communication of syphilis, small-pox, &c., to the unborn child; and that substances taken into the stomach of the mother can affect the infant, is shown by the experiments of Majendie, who found in the fœtus of animals the odour of camphor, and the colour of madder, with which he had fed the mothers. It is still further established by the case reported by M. D'Outrepont, of a fœtus poisoned by opium taken by the mother.

Admitting this point to be established, it remains to be seen whether the effects described above, and imputed to the direct agency of the ergot of rye, bear any resemblance to the effects produced by the introduction of this drug into the circulation. Upon this point we have very satisfactory information in the elaborate essay of Mr. Wright, already alluded to. Before proceeding to recount the results of his experiments, he takes notice of some of the epidemics of *spasmodic ergotism*, caused by eating bread made of rye containing a large portion of ergot, which visited different parts of the Continent during the last century. This disease almost devastated Freybourg, and overran many of the Cantons of Lusatia, Saxony, and Sweden. According to Videlius, the patients were attacked with spasms and convulsions, accompanied with violent pains, which were said to equal those of luxation, and to be similar in their type. In some instances the patients became lethargic, and when recovering from such state gave respectively signs of stupidity, intoxication, and extreme lassitude, after which the fit subsided for a time. But there generally remained vertigo, *tinnitus aurium*, *nebulæ oculorum*, rigidity of the members, and excessive feebleness.

[The effects of this medicine, when introduced directly into the circulation, may be learnt from the experiments of Mr. Wright.]

It is plain that the longer the time that elapses after the medicine has been taken into the stomach of the mother, the more certainly will its noxious principles be absorbed and mixed with her blood, the more certainly also will these principles be transmitted to the fœtus by the constantly arriving current of blood through the umbilical vein, and the more likely will the fœtus be to suffer from their effects.

From these observations I think we are justified in coming to the conclusion, that the administration of ergot of rye to a woman in labour is attended with danger to the child, whenever a time sufficient for the absorption and transmission of its noxious properties elapses before the child is born; and from the cases above stated I am inclined to place two hours as the limit of safety, and to consider a prolongation of labour beyond that period as perilous to the infant.

Dublin Journal of Medical Science, May, 1844, *p.* 218.

124.—ON PUERPERAL FEVER.

By Robert Storrs, Esq., Doncaster.

[We publish the substance of Mr. Storrs' paper, not so much to prove the contagiousness of certain forms of puerperal fever, respecting which opinion there can be very little doubt, but to show the mode by which the practitioner may carry the contagion from one patient to another: and we would particularly call the attention of every obstetric practitioner to this interesting subject. Mr. Storrs thinks that medical men do not go far enough in considering this disease to be propagated by medical men and nurses from one puerperal patient to another. He thinks that it is quite as frequently carried by the medical attendant to each fresh labour-case from some original infectious case, whether of gangrenous erysipelas, of typhus fever, or of whatever animal poison besides may hereafter be found to produce it. In some cases which occurred in his own practice, he has no doubt that he took it to each patient from a case of gangrenous erysipelas with subsequent abscess, which he was attending at the time of these unfortunate occurrences. And such may be the case of other practitioners. They think that they convey the contagion from one puerperal patient to another, instead of from one common source. They probably lose a puerperal case and immediately take every precaution to prevent a similar occurrence, by careful ablution, and a complete change of dress. Nevertheless the next case of labour is attended with the same fatal result; simply because the practitioner is still in attendance on the case which originally gave rise to the mischief. Mr. Storrs was not only himself convinced of this fact, but wished to ascertain the experience of other practitioners, and for this purpose he wrote to several of those who had met with the disease in their practice. Among the rest to Mr. Reedal, of Sheffield, from whom he received the following remarks.]

At the time of my attendance on those females who were subsequently attacked, I had under my care a young man labouring under sloughing bubo, combined with erysipelatous inflammation of the scrotum and nates, of a malignant character, which required dressing daily, and which ultimately proved fatal. It may be somewhat corroborative of the supposed dependence of this form of puerperal fever on an animal poison generated by this sore, and propagated by contact, that the sister of the young man, who waited upon him, was seized with erysipelas of the head and face, of a very low, typhoid nature, which terminated fatally in a few days.

It would be unnecessary in me to repeat my implicit belief in the contagiousness of this disease, and its connection with this case of erysipelas; but if further confirmation were needed, I might adduce the circumstance, that immediately antecedent to my taking the charge of the above case of erysipelas, I had met with no cases of puerperal fever, and that upon discontinuing my attendance upon the young man (which I immediately did upon the belief that I was the

medium of conveying infection from him to the puerperal cases), I had no recurrence of puerperal fever.

I may give it as my opinion, that in all my cases the disease had one common origin, viz., the bubo, and was not communicated from case to case.

I should also wish to state that at the time those cases occurred to me, Mr. Parker, then my pupil, but now resident in Sheffield, attended many midwifery cases, and all recovered well. He never visited the erysipelatous patient.

The above cases were not confined to one locality, but were living in different parts of the town, showing that the disease did not arise from any local cause. As I have previously stated, I had very strong suspicion, after the first case or two, that I was conveying the infection, but could not discover how until the sister was seized. This was the most malignant case of erysipelas I ever witnessed. I then began to think whether I was not conveying the poison from this source.

[In these as well as in all the other cases reported, treatment proved unavailing. Mr. Storrs proceeds to say—]

Three surgeons, residing in the same town, attended the post-mortem examination of a patient who had died from gangrene after an operation for strangulated hernia, and were all of them employed in handling the diseased parts. One of them was called from the inspection to a case of labour, which terminated in fatal puerperal fever ; he had others in rapid succession. The other two surgeons had also fatal cases of puerperal fever within a day or two after the same inspection.

On casually meeting, they mentioned their misfortunes to each other, and were thus convinced of the origin of the disease. They all abandoned practice for a short period, and had no more of it.

I would here briefly draw the attention of the reader to the remarkable and striking fact of Mr. Reedal having five fatal cases of this horrid malady in labours which he attended so immediately after dressing a case of malignant erysipelatous disease, and on his leaving off attendance on this case having no more of it, and that neither his pupil even, nor any other medical gentleman in Sheffield, had any instances of it among their labour cases ; also that Mr. Sleight had two cases whilst in attendance on a case of erysipelas; that Mr. Hardey's cases also arose while he was in attendance on a case of sloughing abscess and of erysipelas. And again, that three surgeons were simultaneously the means of spreading puerperal fever from one post-mortem examination of a case of gangrenous erysipelas—a combination of evidence I think sufficient to convince the most sceptical that this disease produces a subtle animal poison, which is instrumental in propagating, when puerperal women are subjected to its influence whose predisposition favors it, a disease in about thirty-six or forty eight hours afterwards of the most inflammatory, prostrating, and violent character—a disease which stamps death on the features and in the symptoms immediately on its occurrence.

[Mr. Storrs next enumerates a great many cases recorded by different practitioners, all of which prove that each disease had a common origin from some case of erysipelas or sloughing ulcer. He concludes his very interesting paper with the following advice.]

As it is well to be always guarded against such a misfortune, I think it desirable for midwifery practitioners to avoid attending labours in the same dress in which they attend their ordinary patients, especially the coat, as this garment must be the one most likely to be the means of conveying fomites; and at any suspicious period, when typhus or erysipelas are prevailing, to carry out the same carefulness even in the after attendance on labour cases.

I should also, after a post-mortem of any kind, or after any operation upon any case of erysipelas, or of typhus, recommend the most careful ablutions of the hands, and for the surgeon to avoid attendance on a labour in any part of the dress in which such operations have been performed, not forgetting the gloves, as the hand and arm are the chief instruments of contact. Where, however, the disease has been unfortunately once set up in a practice, an absence from home for a fortnight or three weeks, a total change of raiment, the most careful ablutions, and a perfect avoidance of every case likely to have been the source of animal poison, should alike be adopted by the practitioner.

Prov. Med. Journal, Dec. 2, 1843, *p.* 163.

[In the Provincial Journal for January, 13, 1844, p. 287, Mr. Elkington, of Birmingham, relates several cases which in a remarkable degree confirm the previous facts and opinions.]

125.—ON EXTIRPATION OF DISEASED OVARIA.

By one of the Editors of the Lancet.

[A very able, and we think an impartial review of this subject, is contained in one of the Editorial paragraphs of the Lancet. It is as follows :—]

The excision of dropsical ovaria, by what is called the large abdominal section, having lately attracted considerable attention in the surgical world, we propose, by a reference to general experience, and a numerical review of such facts as have been put on record, to examine the question whether that operation be justifiable under ordinary circumstances? Such a question with respect to any operation for the removal of a diseased part, hinges mainly on the following considerations :—1st, the degree of danger or suffering entailed on the patient by the disease; 2ndly, the degree of danger to life attendant on the operation; 3rdly, the sufficiency of the operation for the desired end; 4thly, the sufficiency of other means, comparatively

unattended with danger, for the alleviation of the symptoms; and, lastly, the certainty with which the disease can be diagnosticated, a very important consideration in every case suppposed to demand a capital operation in surgery.

First, then, of *the danger or suffering entailed on the patient by ovarian disease.* Such disease is seldom of a malignant nature, for although most ovarian tumours contain masses of matter of a scirrhous hardness, these masses are usually of a sarcomatous rather than of a truly scirrhous kind, and do not pass into ulceration. The disease in a few instances advances rapidly, but, in a great majority, is of an indolent character. In many cases it never increases to any great size, though in others it attains an immense magnitude, contracts extensive adhesions, and, by its mere pressure, causes severe constitutional irritation, peritoneal inflammation, and other disastrous or fatal effects. Till the tumour has attained a large size it very rarely occasions any serious constitutional disturbance, and a vast number of women carry such tumours through a considerable portion of their lives, without material derangement of their health, and finally die of some other disease. On the whole, then, we believe that general experience will bear us out in affirming, 1st, that ovarian disease is frequently fatal; 2ndly, that more frequently it exerts but little appreciable influence on the duration of life; 3rdly, that it is seldom attended with severe suffering except in a very advanced stage of its progress, which progress, in most cases, is extended through many years; lastly, that in a considerable number of cases it neither perceptibly curtails life, nor attains such a magnitude as to occasion severe suffering to the patient, or to impair her general health in any remarkable degree. It is perfectly evident that, in such a disease, no operation which greatly endangers life would, in a general way, be justifiable. Let us therefore consider,

Secondly, the degree of danger to life attendant on the excision of diseased ovaria. On this subject a just conclusion can only be arrived at by a numerical reference to all the cases in which the result of the operation has been recorded. There are now on record, as far as we know, thirty-three cases in which the large abdominal section has been practised with the intention of extracting a diseased ovarium. In ten out of these thirty-three cases the operation has been fatal, giving a mortality of not much less than one in three. We might here terminate our inquiry, since it is quite clear that an operation which affords the patient not much more than two chances out of three of escaping with life ought, generally speaking, to be considered as entirely out of the question for the cure of a disease which, in a majority of instances, neither very materially shortens life nor occasions intolerable suffering. But we will proceed with our investigation, because, unfavourable to the operation as the facts above stated may be, the view of it that might be deduced from those facts simply, without any further details, would still be far too favourable. We proceed, therefore, to remark,

Thirdly, on the sufficiency of the operation for the desired end, namely,

the removal of the disease. Let us here again have recourse to numbers. In seven out of the thirty-three cases adverted to above, either no ovarian tumour existed, or the extraction of the tumour was prevented by insurmountable obstacles; so that, from these data, setting aside the chance of being killed by the operation, the patient has rather more than one chance in five of undergoing all the torture to no purpose whatever. Further, it might naturally be expected that such ineffectual attempts would be attended with greater mortality than the actual performance of the operation, and accordingly we find that, of the seven cases in which the operation has been attempted but not accomplished, either through absence of the presumed disease, or the presence of insurmountable obstacles, no less than three have died. But we will now comment,

Fourthly, on the sufficiency of other means comparatively unattended with danger, for the alleviation of the symptoms. A common ovarian tumour, in the earlier stages of its progress, causes no immediate danger to life, and there is, in a large proportion of cases, ground to hope that it may never do so. Under such circumstances, it would appear to us an act of insanity, if not worse, to undertake an operation for its removal, which has been shown to bring the life of the patient into the most imminent peril. On the other hand, when the tumour has attained a great magnitude, and occasions suffering and danger to the patient, relief may generally be obtained by tapping to diminish the distension of the tumour, leeches and counter irritation to obviate inflammatory action, and anodynes and other appropriate means to allay constitutional irritation. These means will, indeed, require to be frequently repeated; but is not that preferable to an operation which offers little more than two chances in three of escaping with life, and that operation resorted to under circumstances which render the possibility of detaching the tumour very problematical, on account of the likelihood of extensive adhesions having formed? We hold, then, that in the case of such a tumour, palliative measures are to be preferred; and we entirely subscribe to the opinion of William Hunter "that a patient will have the best chance of living longest under it who does the least to get rid of it."

But, lastly, *of the certainty of the diagnosis in ovarian disease.* We find, in surgical writings, ample directions for discriminating between ovarian dropsy and ascites, and this, doubtless, is not difficult; there are, however, various encysted and other abdominal tumours, between which, and the disease of which we are treating, the diagnosis is by no means easy, while the diagnosis between ovarian and some uterine tumours is to the last degree difficult; Dr. Henry Lee pronounces it impossible. We think, therefore, on the whole, that they who have hitherto undertaken the perilous operation of extirpating diseased ovaria, have been more fortunate in their diagnosis than future operators are likely to be. Mr. Lizars candidly records one case in which he operated, where no tumour at all was to be found, yet that gentleman is an able and experienced surgeon.

To conclude, in expressing our decided conviction that the extir-

pation of diseased ovaria ought not to be admitted among the commonly recognised operations of surgery, we do so less on the ground of what is called general experience, which, after all, may be considered as merely synonymous with general opinion, than on the statistical ground afforded by a review of the *results* of the cases on record. We would ask any reasoning man, whose mind is unbiassed by a personal interest in the operation, are those results such as to justify its repetition under ordinary circumstances? The writings that have been published on this subject are of a very mixed character. Dr. Clay's work is a mere piece of special pleading for the operation, conducted at the expense of a complete, though, we trust, unintentional, mis-statement of recorded facts. Thus he states the number of cases that had been operated on up to the time of his publication, as thirteen, of which twelve were successful, and one fatal; whereas the real number of operations then on record was twenty-eight, whereof nine had been fatal. Among the successful cases, also, he reckons two by Mr. Lizars, in one of which there was no tumour at all, and in the other the tumour could not be removed; and a case by M. L'Aumonier, in which an abscess within the Fallopian tube was mistaken for a dropsical ovary. Pretty success, truly, where a woman runs the risk of her life simply for the honour of being made the subject of an experiment in surgery! Some of the cases recorded by different writers are very unsatisfactory in their details. Mr. Lizars, Mr. Walne, and others, have evinced the most perfect candour in their statements, and a surgical boldness and skill in the treatment of their patients, which are highly creditable to them. We cannot, however, but regret that skill and daring should be thrown away on an undertaking which is discountenanced by the plainest appeal to facts. We do not assert it to be impossible that a case might occur presenting a catenation of circumstances which would render the operation warrantable; but what those circumstances could be, it would, we apprehend, not be easy, *à priori*, to predicate, and, in a general way, the operation cannot, in our opinion, be too strongly condemned.

Lancet, March 30, 1844, *p.* 45.

[In a review of the same subject in the Edinburgh Medical and Surgical Journal for April, the operation is likewise looked upon unfavourably. Out of 42 cases which are there referred to, there were 33 in which the tumours were extirpated and of these 11 died; in 9 cases in which the tumours were not extirpated 3 died; so that we find one in three died whether the operation was completed or not. The reviewer then goes on to say]—

It is scarcely, however, to be expected that all the fatal cases, in which the operation has been performed, have been published. It would be perfectly legitimate, therefore, to conclude that the fatality is greater than these tables prove it to have been. Now, the question for consideration is, are we warranted to recommend or to

perform an operation which proves fatal to one out of every three cases? that is to say, is it allowable to sacrifice one human being for the benefit of two survivors? Those who have appeared as the most strenuous advocates for the operation assert that the abdominal incision for the removal of diseased ovaria is as legitimate an operation as amputation of the thigh, the operation for hernia, for stone, or other great surgical operations, seeing that the mortality is not greater than that which attends these operations. We shall, therefore, very shortly attempt to point out the proper light in which we conceive this question ought to be viewed.

If we look alone to the mortality, independent of all other considerations, and assume the above tables as correct in giving the ratio of mortality for the large abdominal incision, we find that the mortality is not greater than for other great surgical operations. Thus M. Malgaigne has shown that in all the Parisian hospitals, from 1836 to 1840 inclusive, 201 amputations of the thigh took place, but of this number 126 died; and the result of amputations of all kinds showed a mortality of 38 in the 100 for pathological causes, and 49 in the 100 for traumatic causes. M. Textor, on the other hand, in mentioning the statistics of strangulated hernia treated at Wurtzbourg from 1836 to 1842, mentions that, of those subjected to an operation, 32 were cured and 24 died, or 3 out of every 7 cases; while at Paris the mortality was 4 out of every 7 cases. All this would seem, therefore, to be a strong proof of the legitimacy of the abdominal section, seeing that the mortality is not so high for it as for these surgical operations. This is quite true; but the difference between the one operation and the other is this, that the one saves 3 out of every 7 patients who could not by possibility survive even a few days were the operation not performed; and the other sacrifices one unnecessarily to prolong for a few months or years the lives of two who would perhaps after all, have lived as long had no operation been performed. In the one case, the amputation, or operation for hernia, is performed for the legitimate purpose of saving life which otherwise could not be saved; in the other case, as the abdominal section, life is heedlessly sacrificed, in the attempt to relieve what, after all, is only a burden, and has never yet been proved to shorten the average duration of human life. In the one case the surgeon is acting in conformity with the highest principles of humanity and morality, doing all he can to save the life of a fellow creature; in the other, while we cannot deny that he may conscientiously believe that he is undertaking what is to save life, we fear he is influenced more by the eclat of performing a great and dangerous operation.

But independently of this moral objection, and we hold it to be of itself unanswerable, there is another which the history of the cases of abdominal section painfully point out. This is the impossibility of detecting beforehand whether the case be a proper one for operation or not. Thus the above table shows, that, out of 42 cases which were operated on, in 9 either no tumour was found, or it had

contracted such firm adhesions to the surrounding organs that it could not be removed. Now, we would calmly ask those men who defend this operation, if it be consistent with the common principles of surgery to risk unnecessarily the life of every fourth patient by performing a dangerous operation, which will fail to relieve her in any way, and which will necessarily kill one out of every three subjected to it? Is it not, on the other hand, the first principle of the surgical department of the healing art, that an operation is never to be performed, till all the resources of art have failed to relieve the patient, and the delaying an operation would be attended with fatal consequences? Is it not, in fact, to save life that every great operation is performed, and only then when it is apparent that it offers the only means of preserving the life of the individual?

But what is the case with those labouring under ovarian diseases? They may not only survive for years, but, by appropriate medical treatment, the tumour may in many cases be greatly reduced or rendered stationary. But even if this desirable end should not be attained, we know that life may be prolonged for an indefinite period without having recourse to extirpation. The tumour may be again and again evacuated of its fluid contents, with comparatively little risk to the patient's existence; and those cases in which the tumour is more solid are the very ones which even the advocates for the abdominal section allow are unfit for operation.

An unbiassed and calm review of all these points cannot fail to satisfy every one but those who take this means of bringing themselves into notoriety, that the abdominal section for the removal of ovarian tumours is uncalled for, is an useless sacrifice of human life, and never can become one of the legitimate operations of surgery.

Edinburgh Med. and Sur. Journal, April, 1844, *p.* 469.

[Dr. Cormack ends a very excellent notice of the different operations of this kind by the following objections.]

1*st. The difficulty of forming a Diagnosis in cases of Ovarian disease.*—The impossibility of ascertaining either the existence of any disease of the ovaries, the real character of such disease, or the adhesions or connections which it may have originally held, or have formed during the progress of its growth, has been freely granted by every experienced physician and surgeon who has directed his attention to the subject, and is also made abundantly manifest by the cases of extirpation which have been recently recorded. In the first of Mr. Lizars' cases no tumour existed, and the same mistake was committed by Dohlhoff of Germany, and Dr. King of Saxmundham. Mr. Lizars in one case, Drs. Granville, Dieffenbach, and Martini, also in one each, and Dr. Clay in two instances, laid open the abdomen, and were forced to desist from further operative procedure, in consequence of the connexions which the mass had formed. In many of the cases adhesions existed which were not suspected before the operation.

2*d. The danger of Hæmorrhage.*—The extent to which the incisions must be carried, and the adhesions which must be destroyed in many cases before the tumours can be removed, would lead us, *a priori*, to dread the consequences of loss of blood. In Dr. M'Dowall's third case the patient nearly lost her life from the loss of blood. In Mr. Lizars' second case, hæmorrhage occurred two hours after the operation, so profusely, as to make the attendants give up all hope of a favourable result ; and in Dr. Clay's fifth case, the loss of blood was considerable, and the patient expired an hour and a half after the completion of the operation.*

3*d. Danger of Peritonitis.*—Some of the recent writers treat very lightly of the risk of inflammation following the peritoneal section, but Mr. Lizars' third case proved fatal from this cause ; in all probability, Dr. Clay's fourth case also, but no dissection took place ; likewise one recorded by Dr. Granville in the *Medical Gazette*, during the present year ; and, lastly, Mr. Key's.

4*th. The nature of the disease does not sanction such a violent remedy.*—In a large proportion of cases, the tumour constituted a mere *incumbrance;* indeed, it is distinctly so stated in almost every case. The patients might therefore have lived the natural period of their lives without having suffered a tithe of the torture they had to suffer during the performance of the operation, and the protracted convalescence.

In conclusion, leaving altogether out of sight the immediate and imminent danger to which they were exposed, it must be remembered that all the recent *successful* (?) cases were published very shortly after the operations were performed, and before a sufficient length of time had transpired to test the permanency of the cure ; and it must be also borne in mind, that the tumours contained far more solid brain-like matter than is usually met with in simple encysted ovarian tumours, affording too good grounds for suspecting the re-appearance of a specific disease.

Lond. and Ed. M. J. of M. S., Jan. 1844, *p.* 67.

[Mr. Samuel Crompton, of Manchester, has drawn our attention to the unfavourable opinion which Dr. William Hunter entertained

* Mr. W. A. M. Heath, Lecturer on Midwifery in the Manchester School of Medicine and Surgery, has narrated a case, in the *Medical Gazette*, which proves the correctness of the remarks made above. His patient, a woman 46 years of age, had observed her bulk to be increased twelve months previous. He says, "after repeated examinations, and most careful manipulations, by myself and colleagues, made at different times, and in every variety of manner, the conclusion arrived at was the presence of an ovarian tumour ; and it was our UNANIMOUS OPINION, that the condition of the patient, and the mobility of the tumour, made it a fair case for extirpation by the abdominal section." The operation was performed at 11 o'clock A.M., on the 21st November. It consisted of an incision from the ensiform cartilage to the pubes, and "the tumour now came into view, and was recognised as the uterus distended by solid matter." It was removed ; the patient sunk, and died at 5 o'clock on the following morning. The growth consisted of the fibrous or hard tumour of the uterus.

respecting this operation in his "Medical Observations and Inquiries," Vol. 2, p. 41.]

Med. Gazette, Feb. 2, 1844, *p.* 569.

126.—ON THE DARK ABDOMINAL LINE EXTENDING BETWEEN THE PUBES AND UMBILICUS AFTER DELIVERY.

By John Rose Cormack, M.D., F.R.S.E., Physician to the Royal Infirmary of Edinburgh, &c.

[Some little time ago Mr. Turner published a paper in the Edinburgh Monthly Journal, describing, in recently delivered females, a dark abdominal line or stripe, extending between the pubes and umbilicus, and commonly going up even to the ensiform cartilage. Dr. Cormack has further investigated this subject, and gives us his views in a series of interesting cases. He comes to the conclusion that this appearance as a medico-legal test cannot be depended upon, as it often manifests itself in males, and in females independent of delivery. It may be valuable, however, when other and more certain symptoms of delivery are present. Dr. Cormack's conclusions are as follow:—]

1. Some days after delivery at the full time, a dark abdominal line, such as Mr. Turner has described, is almost invariably present. The deepness of its hue is modified by various accidental circumstances, but particularly, (like the areola) by the complexion of the female.

2. During menstruation and pregnancy, after abortions and miscarriages, the same line is also most commonly seen; but generally, it is less distinct, than after a nine months' gestation.

3. The dark abdominal line may be seen in females, quite unconnected with pregnancy, delivery, or any affection of the uterine system.

4. The dark abdominal line occasionally appears in males, when the mucous membrane of the intestines, bladder, and urethra are affected; [and possibly, it may be added, in other circumstances.]

5. From the diversity of causes which give rise to this appearance, its presence can be of no use whatever as a medico-legal test of delivery; although its absence in suspected cases, might, in connection with other circumstances, strengthen the belief that the woman had not been recently delivered.

London and Edinburgh Monthly Journal of Med. Sci., Feb. 1844, *p.* 127.

[In the Dublin Medical Journal for May last, is a letter from Dr. Montgomery, in which he claims the priority in pointing out this indication of pregnancy: and we certainly think that he substantiates this claim, as we do not find that the appearance was even alluded to in any work before the one published by him in 1837, on "the

signs of Pregnancy and Delivery." In this work occurs the following sentence, amongst others of a similar kind:—"In some cases there is also to be seen extending between these two points, (the pubes and umbilicus) a brown line of about a quarter of an inch in breadth, especially in women of dark hair and strongly coloured skin." (p. 304.) Dr. Montgomery concludes his paper just published in the above journal, as follows:—]

In conclusion, I beg to observe, that I have in a few instances observed accompanying the dark abdominal line, another appearance of a similar kind, not hitherto described by any one, as far as I am aware. It consists in a dark-coloured circle, or areola, surrounding the umbilicus, extending in breadth about a quarter of an inch all round that part, and in general, but not always, varying in depth of tint according to the colour of the hair, eyes, and skin of the woman. Unlike the mammary areola, there is no turgescence or elevation of it above the surface of the surrounding skin, neither are there any prominent follicles upon its disk. One specimen of this I saw within the last few days, in a lady with very dark hair and eyes, who had just given birth to a child, which, there was every reason to believe, had been dead nearly a month. The abdominal line was faintly marked, as was also the circle around the umbilicus, and the mammary areola looked faded. The first time I observed this appearance was in 1840, and it was its extreme depth of colour which arrested my attention, while in the act of adjusting a binder on the patient. It is of much less frequent occurrence than the dark abdominal line, but I have never as yet seen it, except in the puerperal woman. Whether it is ever produced under circumstances unconnected with pregnancy, remains, as far as I know, to be determined by more extended observation.

The following are the conclusions, in reference to this dark line, to which my observations have led me:—

1. It is generally, but not always, present in puerperal women, and in women advanced in pregnancy.

2. It is occasionally visible at early periods of gestation. I saw it faintly, but quite perceptibly marked in a lady with very dark hair and eyes, who had just miscarried in the second month. Consequently

3. When it is visible, it is no proof of the woman having been delivered at an advanced period of gestation, or of a viable child, as supposed by Mr. Turner.

4. It is occasionally observable in states altogether unconnected with gestation. In one case, I saw it distinctly marked in a girl of about ten years of age, who was affected with mesenteric disease; and in another instance, I found it well developed in a lady labouring under ovarian tumours and enlarged liver.

5. Its depth of colour is, in general, proportioned to the darkness of the hair, eyes, and skin; but to this, there are many exceptions.

6. It is, in general, more strongly coloured, and more distinctly defined, a day or two after delivery, than before or during labour.

7. Its shade and depth of colour are apt to vary at different times, in the same case, without any obvious or intelligible cause.

8. I have not seen the *umbilical areola* except at the time of mature delivery; but I take for granted, as a matter of course, that it may, like the dark line, be observed during gestation.

Dublin Journal of Medical Science, May, 1844, *p.* 298.

127.—ON STERILITY.

By Marshall Hall, M.D., F.R.S., &c.

[Dr. Marshall Hall throws out a suggestion on the treatment of sterility, which may be tried under some circumstances. There is an extraordinary sympathy between the mammæ and the uterus, so that the functional condition of the former influences that of the latter. "This sympathy is partly nervous in its character, partly vascular. As a reflex action the uterus is made to contract after parturition, by applying the newly born infant to the mammæ. As a vascular sympathy, uterine hæmorrhage and leucorrhœa occur from undue lactation." Many cases of sterility, of course, arise from organic defect, but when the cause is of a functional and less permanent nature, it becomes a question whether or not the uterus can be stimulated so as to assume a healthy functional action in the way suggested by Dr. M. Hall, who says]

Now, as I have already stated, for one week before and at the return of the catamenial period or flow (when a vesicle probably bursts), the mammæ become tumid with blood, and tender from augmented sensibility; in a word, there is the condition which, after parturition, leads to the secretion of milk. Might not this secretion be actually excited under this condition by the appropriate or other stimulus; that is, might not the mammæ be brought into the condition which obtains after parturition? Might not an infant be applied and suckled? And might not the uterine system, in the married and the childless, be brought into the healthy state required for conception?

In this manner not only the female but the male mammæ have been excited to the secretion of milk in such abundance as to supply the infant with abundant nourishment. (See Good's Study of Medicine, ed. 2, vol. iv., p. 79.) But the case most to our purpose is that of a servant-maid, given by M. Belloc, in his "Cours de Médecine Légale," 1811, p. 70:—"Une fille de service, obligée de faire coucher dans sa chambre un enfant qu'on voulait sévrer, et qui dérangeait son repos, imagina de lui donner son sein pour apaiser ses pleurs, qui l'importunaient; au bout de peu de temps cette fille eut assez de lait pour satisfaire cet enfant."

My suggestion, then, is, that when the mamma is excited at the

return of the catamenial period, a robust infant be repeatedly and perseveringly applied, in the hope that the secretion of milk may be excited, and that the uterine blood may be diverted from the uterus and directed into the mammary vessels, and that a change in the uterine system and a proneness to conception may be induced.

I would propose, that the patient should sleep, for one week before, and during each catamenial period, with an infant on her bosom.

Lancet, March 23, 1844, *p.* 10.

128.—*Tartar Emetic in tardy Labour.*—Dr. Gilbert, of Gettysburg, says we are frequently called to cases in which labour has commenced, but the progress is slow, both on account of the insufficiency of the uterine contractions and rigidity of the os tincæ. These cases are most frequently found to occur in patients of tense fibre, and rather robust constitutions. Bleeding produces some relaxation, but rarely hastens the labour; since, in most instances, it does not add anything to the vigour of the pains. Several years ago, while in attendance upon such a case, wishing to expedite the labour, I felt a very strong desire to administer the *secale cornutum*, but was prevented by reflecting upon the well-ascertained effects of that powerful agent under such circumstances. The question whether some other article of the *materia medica* might not be advantageously exhibited, then presented itself to me. Relaxation of the *os uteri*, and expulsive contractions, were the principal desiderata. Emesis in the commencement is always looked upon as a symptom of labour; *ergot* also produces nausea, and frequently vomiting. In evacuating the stomach, the diaphragm, abdominal muscles, &c. are called into violent action: these same muscles aid the uterus in its expulsive efforts; hence emesis may be looked upon as a powerful means of exciting labour and producing efficient expulsive contractions of the uterus, because the same set of associated organs are in action; and such is the sympathy between the stomach and uterus, that contractile efforts are easily transferred from the former to the latter, the more especially since the uterus is about to take on such action of its own accord. Again, while emesis excites, and is accomplished in part by the associated contractions of the muscles constituting the abdominal parietes, it also produces relaxation of the other parts of the system, and of none more certainly than the os uteri, under these particular circumstances. Reasoning thus, I was induced to make a trial of tartrate of antimony and potass, in doses of half a grain the first portion, and then a quarter of a grain every fifteen minutes, until emesis; as soon as retching commenced, the uterine contractions strengthened, and the labour terminated speedily. I have frequently used the tartar emetic since, and always with the most satisfactory results.

I was not then aware that this remedy had been used by Ramsbotham, who, speaking of rigidity of the os uteri, says that "anti-

mony, in doses sufficient to keep up a feeling of nausea, has been exhibited in these cases with marked effect."—*New York Journal of Medicine.*

Med. Gazette, March 15, 1844, *p.* 815.

129.—*Obstetrical Properties of Powder of Colchicum.*—M. Metta has published the case of a woman in whom the powder of colchicum was employed with success as a substitute for the ergot of rye. She had an abortion at the third month, but the placenta not being expelled, and the pains having ceased, ten grains of powdered root of colchicum were given in two doses. Half-an-hour having elapsed without any sensible effect, the same dose was repeated. Soon the orifice of the womb dilated, uterine contractions followed, and the placenta was removed by the hand in a state of decomposition.

London and Edin. J. of M. S., April, 1844, *p.* 359.

130.—*Singular Case of Pregnancy.*—A peasant girl, aged 15, after a violent effort, found a pain in the loins, which always increased after fatigue. Three years afterwards she perceived one day a round body, which projected from the labia pudendi, but repose and the horizontal position easily effected its reduction. She mentioned it to no one. She was married at twenty, and became pregnant two years afterwards. When she had reached the seventh month she felt great pain, on account of the pressure which the displaced uterus exercised on the neighbouring parts. The term of pregnancy having arrived, and the pains commencing, an ignorant midwife kept her for four days without employing any means for terminating her labour. M. Perfetti being at last called in, and seeing the uterus hanging out between the thighs, dilated the cervix uteri by means of two incisions of about sixteen lines long, one in the anterior lip, the other in the posterior. The accouchement and expulsion of the placenta were then accomplished without difficulty.

When the womb was emptied it was reduced. Then, inflammatory symptoms having disappeared under proper treatment, an elastic gum pessary was placed permanently in the vagina. For the last ten months she had no return of the prolapsus.—*Bulletin delle Scienze Mediche,* and *Gaz. Méd.*

Prov. Med. Journal, Dec. 2, 1843, *p.* 180.

131.—*Ovarian Dropsy treated with Ioduret of Iron.* By Septimus Tutin, Esq., Surgeon to the Ripon Dispensary.—[Mrs. H., of Boroughbridge, nearly four years ago, perceived something hard on the left side of the body, from which she occasionally suffered great pain. The tumour continued to increase in size till it became a burden to her. She was much emaciated; countenance pale and anxious, breathing laborious, a short tickling cough, pulse 135; abdomen so large that it overhung the knees to a considerable extent; at the umbilicus was a large tumour of an orange shape,

and in appearance nearly transparent, in the centre of which were evident marks of ulceration taking place, with a view to the outlet of the fluid. Mr. Tutin punctured the abdomen midway between the umbilicus and pubes. He continues to relate the case as follows]—

On my examining the abdomen, I found an enormous tumour, the size of an adult head, occupying the left side, a little above the anterior superior spine of the ileum, of an irregular shape, perfectly hard, and appearing to give her great pain when pressed on. From its situation, and the symptoms attendant upon it, I considered it to be a disease of the left ovary. A long flannel bandage was passed round the abdomen; she was ordered to keep perfectly quiet, and to take the following remedies:—

> Blue pill, three grains; powdered squill, two grains; powdered digitalis, one grain; opium, half a grain three times a-day. With two tablespoonfuls of a diuretic mixture.

These she continued for three weeks without much benefit. I then ordered her to take fifteen drops of the compound tincture of iodine thrice daily, and to rub the ointment of iodide of lead over the abdomen night and morning.

But from this proceeding she obtained little or no relief. The fluid began to increase rapidly, and on the 20th of September I tapped her a second time, taking away seventy-five pints, being three pints more than what was evacuated on the first occasion. The fluid was perfectly clear and aqueous; the tumour appeared rather diminished in size, but still painful. I now prescribed for her the ioduret of iron in two grain doses three times a day, and ordered her to continue the ointment. After taking this about a month, there appeared evident signs of amendment in her general health, but the fluid began again to accumulate, though not so rapidly. On the 5th of December I again performed the operation, taking away sixty-five pints. The tumour now appeared much less, and not so painful to the touch. She was ordered to continue her remedies, and to take three grains of the ioduret of iron thrice daily, as she appeared to be improving under its influence. Her cough was much abated, the breathing more free, her appetite improved, the bowels more regular, and the urine much increased in quantity; the pulse was reduced to 105; in fact, her general appearance was greatly altered for the better. I saw her again about a month after; she had regularly taken her medicine, and was much improved in appearance, but the fluid was evidently on the increase. I requested her to persevere with her remedies, and to let me know, should the fluid again require to be evacuated. Early in April the Rev. Mr. A., who lives opposite to my patient, called upon me, and told me that a very curious circumstance had occurred, which was, that my patient had literally burst, and flooded the room in which she was sitting. He had come over purposely to request I would go over and see her, which I did. On my arrival I found what he had told me was really the case; the

tumour at the umbilicus had given way, and a great portion of the fluid had escaped. The neighbours were so much alarmed that they sent for a medical practitioner in the town ; he readily attended, and secured the part with strips of adhesive plaster and a bandage. On examination I found that the tumour at the umbilicus had given way at the part where the ulcerative process had commenced; I secured it by means of a pyramidal plaster and bandage, passed several times round the abdomen. The tumour in the abdomen had diminished considerably; her cough had nearly disappeared; her breathing was perfectly free; the pulse was reduced to 95, her appetite good, the bowels regular, and the secretion of urine much increased; her general appearance was altogether much improved. I advised her to continue the medicine, increasing the dose of the ioduret to four grains thrice daily until I saw her again, which was in the beginning of May; she was then better, still the fluid had increased in some degree, but not to the extent it had done on former occasions. The tumour was diminished in size. She was ordered to persevere with her remedies.

I saw her again in June; she was so altered in her appearance that I scarcely knew her as the same individual. She said she had walked, on two or three occasions, about half a mile out of the town, and could make herself useful in the house, which she had been unable to do for upwards of three years. The fluid had considerably diminished, and the tumour also. I still requested her to persevere with the remedies, which she did until August, when I had the pleasure of seeing her at my house (in Ripon), so much improved in appearance as quite to astonish me. Once pale and emaciated in the extreme, she now bore the aspect of an individual in the enjoyment of sound health. I again examined the abdomen, and found the enormous tumour diminished to less than one-fourth its former bulk ; the fluid had entirely vanished; the catamenia had appeared on two occasions; her cough had entirely ceased; the breathing was perfectly free; the appetite good; her bowels regular; the pulse natural; she had recovered her usual muscular appearance, and said she had not been so well for some years. She had been out making hay during the summer, and felt no inconvenience from it. I advised her still to take one dose of the ioduret daily, which she did for some time.

She called upon me the following spring, and was in the enjoyment of good health. She told me that she had done all the work in the house for some time, had got up in the mornings at two o'clock to wash, and that she thought of commencing a school for the benefit of herself and children. I have seen her twice since the above period; the last time was on the 13th of September. She said that she continued quite well; the abdomen was reduced to its natural size; she is capable of undergoing her accustomed avocations without inconvenience ; in fact, she declares that she never was in better health.

Prov. Med. J. Nov. 11, 1843, *p.* 107.

RETROSPECT.

In once more recapitulating the various practical suggestions which have been made by different writers in the Medical Journals during the last six months, we shall endeavour as usual to confine our observations to those points which are the most practical, and the most likely to be useful in general practice. There are, no doubt, many good cases and observations which we may have omitted, either because they have already been placed before the profession, or because they have not elicited remarks from the writers which were entitled to much credit for novelty or practical improvement. We have, however, carefully weighed almost every fact and remark, which have lately been placed on record in the different journals, and have omitted nothing of consequence up to the usual time of going to press.

We must, however, be excused summing up the various improvements for the last six months as briefly as possible, owing to the increased quantity of matter which it has been necessary in this volume to compress: and in the following pages we have only glanced at those articles which have struck us as being the most important and interesting. The reader, however, will be surprised at the great many facts and suggestions which would in all probability have been lost or forgotten, but for some common register like the present volumes, wherein it is likely he may find information on almost every subject; and hints for improvement in practice from the most accomplished practitioners.

Mr. Mc Donnell directs the attention of the profession to certain cases of empyema, which in many respects might have been mistaken for aneurism. *Empyema*, we may remind our younger readers, is when there is formed in the chest a collection of pus, which more or less compresses the lung and impedes respiration. And in the cases related by Mr. Mc Donnell, these collections of pus were so situated as to receive the pulsations of the heart, and thus gave rise to pulsating tumours externally, which might easily have been mistaken for aneurismal affections. These cases seem new in the history of empyema. In all the cases related by Mr. Mc Donnell, the tumours presented themselves in the situation usually occupied by the apex of the heart, and in all, the heart itself was dislocated to the right of the sternum. This circumstance therefore easily accounts for the pulsation in the abscesses, which was different from that felt

when a tumour is placed over a large artery, and even from that of an ordinary abscess over an artery. The pulsation in these cases of empyema was uniform, expanding and strong, owing to the heart pulsating strongly and equally against the walls of the abscesses and the contents being fluid and of equal density. It is very possible for the practitioner to mistake these cases for thoracic aneurism, and pulsating cancer of the lungs; and it is only by minutely attending to the means of diagnosis pointed out by Mr. Mc Donnell, that we shall be able accurately to discriminate between these diseases. (1.*)

The affections of the urinary organs continue to occupy the attention of the profession, and to excite as much interest and discussion as any other subject: and there are few subjects in practical medicine which have been more advanced in late years than the pathology and treatment of these diseases. The correctness of the views of Liebig on this, as well as on other subjects, has lately been much questioned by gentlemen who are fully competent to form and to maintain an opinion in contradiction to this eminent chemist. Dr. Aldridge, of Dublin, maintains that the views advanced by Liebig and others on some subjects connected with urinary deposits are erroneous. He asserts "that in disease the urine is more frequently characterised by alterations in *the quantity of water excreted* than by changes in the proportions of its essential organic elements; and that a deposit of lithates, in a case where there is excessive secretion from no other organ, is the sign of an irritation, either primary or secondary, of the renal substance." Hence he maintains that the common opinion is erroneous which attributes the formation of lithic acid deposits to certain kinds of food, atmospheric influences, and particular constitutional predispositions; and he disbelieves altogether in the existence of lithic acid and phosphatic diatheses. "Whenever the quantity of water in the urine becomes diminished below the minimum necessary for holding in solution the sparingly soluble lithic acid, or super-lithates, at a given temperature, those substances will become deposited at that temperature, provided the urine be sufficiently acid." This quantity of water in the urine may become diminished by various causes, as by the increase of perspiration, and by some irritation of the kidneys; and when in consequence of this, lithic acid becomes deposited, it gives rise to an increased irritation or subacute inflammation in the tubular and cutical substance of the kidneys, which is generally followed by a cachectic state of the system, and the urine then ceases to be acid. When the urine ceases to be acid, it can no longer hold the earthy phosphates in solution, which then become deposited on any substance in the urinary passages. If these views be correct, it will be evident that the treatment required for the lithic acid diathesis will be to remedy those affections which produce diminution of the

* The figures at the end of this and the following paragraphs, refer to the articles in the present volume, where the different subjects referred to in this summary are treated of at length.

quantity of water in the urine. But for our own part we should not like to trust entirely to this mode of treatment, but should combine it with the alkaline medicines which are in common use. It will, however, be a useful suggestion to remember that the bicarbonate of potash and other alkaline medicines will be more efficacious when given in much larger quantities of water than are usually recommended. (2.)

Dr. Heaton, of Leeds, has published a series of interesting cases of albuminuria, which occurred in University College Hospital under the care of Dr. Williams. There seems to be a certain analogy, according to Dr. Williams, between various organic diseases of certain viscera, as tubercle in the lungs, cirrhosis of the liver, granular degeneration of the kidney, and opacity and thickening of the valves and membranes of the heart, all of which are regarded as the result of a deposit of lymph of an imperfectly organizable character, such lymph showing a strong tendency to induration and contraction subsequently to its deposition. Hence we may suspect that when one of these diseases is present we may find analogous affections in the other organs which are disposed to receive these depositions. And the cases detailed by Dr. Heaton are valuable in proving this to be the fact. Granular disease of the kidney was found to be connected with tubercle of the lungs, and with a cirrhose state of the liver; also with diseased valves of the heart, and with tubercular deposit on the peritoneum. When the proper texture of the kidneys is thus supplanted by a deposit of lymph of an imperfect character, we can easily see how their functions may be changed If these organs possess the property which Dr. Prout assigns to them, of exerting a disorganising influence on the materials to be discharged from them, this morbid deposit will so alter their powers that the fluid part of the blood will be poured out as through a mere filter, retaining more or less of its albuminous character. (3.)

While on the subject of affections of the kidneys we may refer to our fourth article, in which all the best tests for diseased states of the urine will be found. The practitioner is often at a loss, at the moment, for some simple directions to guide him in detecting the different deposits, and for this reason we have placed before him the table constructed by Dr. Griffith, and appended to it that excellent epitome on this subject by Dr. Christison, from the *Library of Medicine*, which will enable any one, with the greatest ease, to satisfy himself respecting any of the more common urinary deposits. (4.) But for the detection of sugar in the urine we recommend the reader particularly to consult the paper by Dr. Golding Bird. Of course the presence of sugar in the urine can at any time be proved by chemical analysis; but this is too troublesome and even difficult for men in active practice to adopt. We must therefore be ready with more easy methods of investigation; otherwise the case will often be overlooked. Dr. Bird has placed before us the different tests which are generally the best and the most easily adopted. He first mentions *Hünefield's test*, which however is

too uncertain to be of any practical value. Perhaps the best test is the one called *Trommer's test.* This, which is the latest test suggested for the detection of sugar is as follows: "Add to the suspected urine contained in a large test tube, a few drops of a solution of sulphate of copper; a very inconsiderable troubling generally results, probably from the deposition of a little phosphate of copper. Sufficient liquor potassæ should then be added to render the whole strongly alkaline, a greyish-green precipitate of hydrated oxide of copper falls, which if sugar be present wholly or partly redissolves in an excess of the solution of potassa, forming a blue liquid, not very unlike the blue ammoniuret of copper. On gently heating the mixture nearly to ebullition, the copper falls in the state of sub-oxide, forming a red and copious precipitate. If sugar is not present, the copper is deposited in the form of black oxide." This seems to be a most delicate test for the presence of sugar, and will readily detect it in the urine, even when very largely diluted. The other tests are, by *the growth of torula,* by *the development of fermentation,* and *Runge's sulphuric test,* all of which are well described by Dr. Bird in article 5. (5.)

Dr. H. Bennet points out the success which in the French hospitals has attended the exhibition of large doses of nitrate of potash in rheumatism. This subject has repeatedly been before the profession, but as certain eminent practitioners have suspected that these large doses of the medicine may occasionally have been the cause of inflammation and suppuration of the kidney, it is necessary to explain that this will never be the case when the medicine is sufficiently diluted. Dr. H. Bennet says that when sufficiently diluted one and even two ounces may be taken in twenty-four hours, while half an ounce might act as an irritant poison if given in a very concentrated form. M. Gendrin, of Paris, thinks more highly of large doses of nitrate of potash in acute rheumatism than of any other medicine. His doses vary from 6 to 12 or 16 drachms in the twenty-four hours, and Dr. H. Bennet says that he has treated, or seen treated, at least 70 or 80 cases by this method. It must be dissolved in the proportion of half an ounce of the nitrate to one and a half pint or two pints of barley water or some other bland liquid. This may be the only beverage of the patient and taken as required. The action of the medicine seemed to be *sedative,* the pulse falling rapidly, both as regards frequency and strength, and its good effects are probably owing to this circumstance. This effect of the drug is confirmed by the experiments of Orfila. When it was given to dogs death was preceded by giddiness, slight convulsions, dilated pupils, insensibility, and palsy. Dr. H. Bennet has found this medicine beneficial, not only in acute rheumatism, but also in puerperal fevers, and in other inflammatory affections in which he has given it in doses of an ounce or more in twenty-four hours. (6.)

There are many diseases in which periodicity in the attacks or paroxysms is evident, and which has led Dr. Mayo to make use of similar treatment to that adopted in ague. For example, a lady

consults her medical man for general debility and emaciation, with a regular and periodical attack of pain and oppression of the head, which may come on about the same time and last three or four hours. She may have had ague previously. In such a case Dr. Mayo would give 50 drops of tinct. opii an hour before an expected paroxysm, or what we should recommend as a better substitute, a quarter or half a grain of the acetate or muriate of morphia ; and after the paroxysm has subsided, five minims of liquor arsenicalis, every sixth hour. This kind of treatment would, however, chiefly be beneficial when the disease for which it was prescribed was periodical in its attacks. Another class of cases is sometimes met with, in which, after a regular quotidian for many months, the usual expected return of the paroxysm is perhaps substituted by an attack of epilepsy. In such a case it is evident that the usual treatment by bark, or steel, or arsenic, would be rather injurious than beneficial. In short, we think with Dr. Mayo, that the subject of masked intermittents has not been sufficiently attended to, and that many lingering diseases, if watched attentively, will be attended with periodicity in the paroxysms, and will be curable by the means usually employed in ague. (8.)

In a case of asphyxia related by Dr. Shearman of Rotherham, we have some very sensible remarks as to its treatment. It was that of a man who had hanged himself and was in a complete state of suspended animation ; he neither breathed, moved, nor had any perceptible circulation. "The treatment in such a case would be to bleed the patient, if possible, without taking heed to the imperceptible pulse ; and it is certainly better to take blood from a vein than from an artery. It will generally be noticed that in the act of taking blood the pulse will rise instead of sinking, and by and by the patient, if not quite dead, will begin to breathe. What is the cause of asphyxia in such a case ? Probably, as Dr. Shearman remarks, a combination of suffocation and apoplexy. So much pressure is made by the cord round the neck as to prevent inspiration, so that immediately the lungs, right side of the heart, and veins, would be congested ; part of the venous blood sent to the lungs through the pulmonary artery would be oxygenated during the first inspiration, but when the next systole of the heart took place, it would be venous, and when thrown out of the left ventricle would act as a poison to the brain, and prevent the respiratory nerves from exciting the muscles of respiration ; at the same time the ligature round the neck prevented the venous blood returning from the brain, and thus produced apoplexy." We think that in such a case the great object is to take away blood either from an artery or a vein, but if possible from a vein, as this would be relieving the brain of some of its poisoned venous blood, and would not, at the same time, prevent that organ being fed and stimulated by the arterial blood. It is surprising to what extent asphyxia may proceed, and yet recovery may be accomplished by energetic treatment. In a case related by Mr. Bree, of Stowmarket, this was the result, although the man appeared

quite dead. "His face was swollen and black with congested blood, the eyes starting forwards, and the tongue protruding. The surface was cold, and the action of the heart not to be felt with the hand." (9.)

Since the use of naphtha was recommended by Dr. Hastings and others, we have tried it repeatedly in cases which we considered as tuberculous, but we must say that in every such confirmed case of tubercular disease we have been disappointed in its efficacy: not so, however, in many cases of chronic bronchitis, in which we believe that it may prove beneficial, but not sufficiently so to induce us to alter the more ordinary mode of treating such cases. It is our duty, however, chiefly to place on record the opinions of others rather than our own, when such opinions seem to be founded on well authenticated cases; and for this reason we have published in this volume the opinions of Dr. Hastings, of London, with those of Mr. Wilson, on the same subject. The latter gentleman publishes the case of a lady who had been for three years in close attendance on her husband, who died of phthisis. She herself became affected with all or most of the symptoms of the same malady, and was pronounced by more than one practical stethoscopist the subject of fatal tubercular disease. She began with ten drops, gradually increased to sixty drops of the naphtha, three times a day. The dose was ultimately reduced to forty drops. The commencement of recovery may evidently be dated from the time she began with the naphtha. She finally recovered completely. (10.)

There is perhaps no disease which requires a greater variety of treatment than tic douloureux. This is owing not only to the great many causes which may produce the affection, but especially to the different pathological conditions which may exist; each of which may require a particular mode of treatment. Dr. Watson draws our attention to that troublesome kind of *face-ache* which hardly amounts to neuralgia, but which is quite troublesome enough to make life miserable. It generally attacks the upper or lower jaw, and is often supposed to be owing to bad teeth. Dr. Watson recommends the *muriate of ammonia*, which will often cure when other things have failed. It may be given in half drachm doses, dissolved in water, three or four times a day, but if it does not speedily produce some good effects it is of no use to persevere with it. The iodide of potassium will often produce remarkable results in these cases, giving rise to the suspicion that the affection may have been periosteal. M. Ducros brushes the soft palate over with strong solution of ammonia, so as to occasion a profuse discharge of tears and saliva; and Dr. James Johnson has found the internal exhibition of the same remedy of great value in these pains of the face, and in severe nervous head-ache. He mixes from twenty to forty drops in a cupful of very thick gruel, to be given at any time when a paroxysm of pain comes on. Another remedy which has lately been used more than usual in these cases is the solution of arsenic, which may probably be especially useful when the attacks of pain come on periodically,

which is very often the case. We shall find the success of this medicine most evident in persons of lax fibre and languid circulation, whose secretions are rather profuse than otherwise, and urine pale and plentiful, and whose skin is cold and moist. It is necessary always to bear this in mind, as it will act prejudicially when the urine is of a deep colour and scantily secreted, or when it deposits the lithate of ammonia. At first we should commence with two or four minims of the liquor potassæ arsenitis, which may be given three times a day, combined with double the quantity of the compound tincture of camphor, and if acid be present, with a few grains of bicarbonate of potash an additional minim of the arsenical solution being added daily, until some effect is produced. It will often be necessary to persevere for some months with this medicine. (11.)

In the treatment of asphyxia in new born infants we ought accurately to discriminate between that produced by actual congestion in the vessels of the brain and that produced by the violent shocks and actions of the womb, the first causing the symptoms of compression, and the latter concussion of the brain. When a child is born with its face of a purple or blue colour, its features bloated, and slow or totally impeded respiration, we suspect the cause to be congestion, and by allowing a little blood to escape from the cord, the symptoms are often relieved in a remarkably short time; on the other hand, when the child is born pallid and relaxed, with a very feeble circulation, we must be careful not to take away blood till the circulation has been stimulated to increased activity by the warm bath, (although we beg to doubt the efficacy of heat in such cases,) the cold douche, ammonia applied to the nostrils, galvanic shocks passed through the cardiac region, &c., and as Joerg has pointed out, that in a rapid delivery the lungs will sometimes not have time to be prepared for their new function, we ought in such cases never to tie the cord, so long as pulsation exists in it, till respiration be established. For many other very useful suggestions in these cases we refer the reader to Dr. Doherty's paper on the subject. (12.)

There are few subjects which require greater discrimination than the treatment of a gouty diathesis. It ought to be remembered that food is not the only source of lithic acid; this may arise from a disintegration of the tissues. Liebig considers that the lithic acid is generally derived from this source, while Prout and Wilson Philip think that it arises chiefly from the chyle. There seems to be little doubt that it may, and does arise from both these sources—that it can be derived both from the albuminous tissues and from an excess of the albuminous matter of the chyle, taken into the blood beyond what is required for the nutrition of the tissues. "The truth appears to be," as Dr. B. Todd says, "that the development of this substance may take place from the imperfect assimilation of the food, quite irrespective of the ulterior changes in the system, or it may occur from certain changes in the system whatever may be the nature of the food." The first of these opinions is proved by the great quantity of lithic acid which will sometimes be deposited after an im-

proper or indigestible meal, and the second, by the same deposit occurring during the course of some deep seated disease, as of the liver, quite independent of, and notwithstanding every care respecting the kind of food taken. With respect to food it is evident that such as will most discourage the formation of lactic acid in the stomach and duodenum will be the best, such as regulated quantities of animal food with a small quantity of vegetables, and especially the avoidance of those saccharine and other vegetable products which may be prone to the acetous fermentation. It is proved that bread and the ordinary vegetables contain the same azotized nutrient principles as animal food, but we must take a much larger quantity to obtain the same amount of nutrient material. In the treatment of the gouty diathesis, these principles are of the first consideration. In an attack of this disease we ought to remember that it is one means of eliminating gouty matter from the system, and therefore its management requires great caution. It is too common to begin immediately with colchicum. This ought however not to be administered at the onset of the disease, till the bowels have been properly cleaned out, nor ought it to be given in the asthenic form of disease, and when it is given it ought to be commenced in small doses, gradually increased, except indeed in some cases of rheumatic gout, in which much larger and earlier doses have been attended with benefit; when the joints continue in a state of chronic inflammation, Dr. Todd recommends a succession of small blisters or the iodine paint, composed of one drachm of iodine, half a drachm of iodide of potassium, dissolved in an ounce of spirit of wine. This may be painted over the parts occasionally, and will be found very useful where any effusion has taken place into the synovial membrane or sheaths. In the treatment of rheumatic fever we must bear in mind that the three channels which are the most favourable to the elimination of rheumatic matter, are the bowels, the skin and the kidneys. It is probably owing to the effect on the kidneys that the value of nitrate of potass is owing, as well as to its remarkable *sedative* power so well explained by Dr. H. Bennett. In the French Hospitals this medicine seems to be given in excessive doses, eight or twelve drachms daily, and would no doubt produce great irritation, were it not dissolved in a large quantity of liquid. Its sedative powers might probably be increased by combining with it tartarized antimony in minute doses. Dr. Todd recommends five or six grains of nitrate of potash with one eighth of a grain of tartarized antimony with a little laudanum if necessary, every four or six hours. He moreover, in common with most practitioners, places great confidence in opium, which ought to be given at least every night, and in the day if necessary, unless some other symptom contra-indicate its exhibition. (14.)

On the subject of articular rheumatism, we have also some remarks by Dr. Monneret, who in 52 cases tested the relative efficacy of colchicum, nitre, and blood-letting. He disagrees entirely with the good opinion of some respecting the power of nitre, both as to its sedative and other effects. He places more reliance on drachm

doses of the tincture of colchicum three or four times a day, and early blood-letting. (20.)

In some cases of retention of urine, especially in old people dependent on partial or complete paralysis of the bladder—and when there has been a good deal of distension, we shall find the ergot of rye of great use. It has been used in such cases for some years, but has not been sufficiently known or confided in. It will be necessary, however, to be careful in administering it when there is any organic disease, either of the bladder or prostate. The dose may be at first 10 grains every morning, increased to 15, 20, or 30 grains. After a time this should be again diminished, or even left off for a few days. The urine should at the same time be drawn off when required. In many cases the bladder will recover its power in a great measure; but about six or eight ounces of urine may remain within it from its inability to empty itself. In this case we shall find six or eight grains of the ergot given three times a day will be of great use. But in all these cases of paralysis senilis, we ought to remember that the frequent emptying of the bladder alone will occasionally give nature an opportunity to recover her energy. This practice is corroborated by interesting cases both by Dr. Houston and Dr. Hargreave ; and in another case referred to by Dr. O'Beirne, the bladder did not recover its tone till nearly a quart of cold water was injected into it, and from the moment this was done, the patient recovered his power. This medicine has not only been found valuable in these cases, but also in different hæmorrhages. *Ergotine* is an extract prepared from the ergot of rye, and in France this is rather a popular form of administering it. It is there considered almost a specific against hæmorrhage in general, including menorrhagia and vomiting of blood, and in St. Bartholomew's Hospital the secale cornutum is used with success in *pulmonary* hæmorrhage, in doses of a scruple every hour for some hours. (23.)

We have repeatedly called the attention of the profession to the cases published by various medical men of the success of electricity in poisoning by laudanum. Another case of this description is recorded by Corfe. The patient had taken an ounce and a half of laudanum the preceding evening, and on his admittance into the Middlesex Hospital, was to all appearance a lifeless corpse: and after all the more ordinary remedies had been tried in vain, Mr. Corfe thought of the electro-magnetic battery, conjointly with electricity. After this had been acting upon him for a time the pulse became more steady, firm, and frequent, and the respirations more indicative of resuscitation. A powerful electrical machine was also got into full play before a large fire: brilliant sparks and strong shocks were occasionally passed through the head, spine, thorax, and abdomen. By these means the whole body was thrown into violent and convulsive succussions and muscular contortions ; and after an hour's application the man suddenly aroused up with the amusing exclamation "Holloa ! you rascals, what are you trying specimens upon me for." (40.)

It will not be necessary for us to swell our pages by recapitulating those various suggestions which are embodied in the shorter articles on "Practical Medicine:" we will therefore pass on to the most important improvements which have recently been suggested in the practice of Surgery.

In the lectures of Sir Benjamin Brodie, lately published, we find scattered throughout, some of the most useful advice on the more common subjects of surgery; such as the general practitioner is constantly in the habit of encountering. We are too much in the habit of bending our attention to rare cases, rather than endeavouring to find out what is most useful for the ordinary evils of life. The reputation and success in life of a practitioner will oftener depend upon his success in treating fifty cases of common occurrence than one or two cases which require capital operations.

What is the best way of removing a polypus from the nose? A ligature can seldom be applied properly; neither can the operation be safely done with the knife, and seldom with the scissors. The forceps, made for this purpose, is no doubt the best instrument. The whole of the opposite surfaces of the blades ought to be quite rough, convex above, concave below, opening laterally; sometimes opening from above downwards. The forceps should be oiled and warmed, the polypus caught by the base, and the instrument cautiously closed. The part should then be not only pulled gently forwards, but twisted a little to each side and then pushed backwards—again twisted a few times, first in one direction and then another, and at last it should be pulled forwards with some force, when it will generally come away entire. It is too often the case that when the neck of the polypus is laid hold of by the forceps, the surgeon suddenly extracts, without the repeated twisting in all directions so strongly recommended by Sir B. Brodie. It is owing to the neglect of this simple procedure that a great portion of the polypus is often left behind. When the diseased part has been removed, Sir B. Brodie recommends that the parts should be painted over every day, by means of a camel's hair brush, with white precipitate ointment. The unguent. hydrarg. nitrat. diluted may also be used, but this causes more irritation than the white precipitate, and does not answer so well. The white precipitate ointment should be applied regularly, not for a few days or weeks, but for years. This should be done effectually; not by just brushing over the parts which are most external, but by smearing the whole surface of the nostril both upwards and backwards, even as far as the pharynx. Astringent lotions may also be used, as zinc or alum. Sometimes the polypus is of a more fleshy nature and attached to the nose by a narrow neck, like those of the uterus and rectum. When this is the case it may be snipped off with a pair of probe pointed scissors, slightly curved. Nitrate of silver may be applied to the part, and it is probable that it may never re-appear. Some polypi, however, it is absolutely necessary to remove by ligature; as in a case related by Sir B. Brodie, in which there was an enormous tumour projecting the velum pendulum palati forward to

the mouth, so that the finger could only just reach its lower margin. In such a case there would be great difficulty in applying a ligature, and it will be evident at once that it would be almost impossible to remove the mass either by the forceps or the scissors. Sir Benjamin Brodie recommends that a bougie be passed into that nostril from which the polypus is supposed to arise, and pushed forwards into the pharynx. The finger is then to be passed to the back of the throat, and the bougie bent so as to bring one end out at the mouth, to which is to be fastened a double ligature. The bougie is then withdrawn from the nose, and of course the ligature follows its course. The ligature is then cut off from the bougie, and the two cut ends hang out of the anterior nostril over the upper lip, the loop at the opposite end hanging out of the mouth. The next step is to get the ligature over the tumour. "For this purpose you cut through the loop hanging from the mouth, so that there are now two single ligatures. One end of the single ligature is to be passed through a silver tube, and putting the tube into the mouth and pharynx, you carry one end of the ligature under the base of the tumour on one side of it. You leave that out of the mouth, and your assistant holds both ends of the ligature, to prevent it from slipping; then with the same silver tube you are to take hold of the other loose ligature at the mouth, and carry that on the other side of the polypus, and there your assistant is to hold it. A knot that will not slip must then be made of the two ends of the ligature that hang from the mouth. You have now a ligature on each side of the polypus, and then, by carefully drawing the ligatures out at the end of the nose, you have got hold of the polypus at its base. A silver tube is then to be introduced into the nostril, and you tighten the ligature upon the shoulder of the tube in the same manner as you tighten a ligature on polypus of the uterus. It must be tightened every day till you have completely cut through the polypus." The polypus, however, should be secured by a ligature, so that when loose, the patient may draw it out, instead of being in danger of choaking. But the method adopted by Dessault is perhaps still more convenient. "You require a silver tube by which the ligature is to be directed into the mouth, a shorter silver tube to be introduced into the nostril for tightening the ligature, and two pretty long ligatures. You introduce a bougie into the nostril and bring out one end at the mouth. To this you fasten a single and a double ligature; the single one must be very long. That being done, the bougie is to be drawn out at the nose, and of course the ligatures follow it. You then cut off the bougie, and you have the two ends of the double ligature hanging out of the nose, and the loop hanging out of the mouth; one end of the single ligature also hangs out of the nose and one end out of the mouth. The single and the double ligature always pass on one side of the polypus; but by means of a silver canula yon draw the single ligature to the other side of the polypus. The ligature being held in its place by an assistant, the end of the single ligature projecting from the mouth is passed through the loop

of the double ligature, and the ends of the double ligature being drawn out of the nose, the single end follows, and you make a ligature which you fasten by means of a canula introduced into the nose." This method of Dessault's is certainly preferable to the one first described.

Another disease referred to by Sir B. Brodie, which is not very uncommon in private practice, and which is not dwelt upon by authors, is a soft elastic tumour on the tongue, which is often mistaken for cancer. In this tumour there may form a little matter, which at last escapes and leaves an ulcer. A probe can often be passed obliquely to some distance. More ulcers than one may exist on different parts of the organ. In this disease Sir B. Brodie recommends a solution of arsenic, beginning with five minims, and gradually increased to ten, three times a day. This should be given till it begins to produce some of its poisonous effects on the system, such as a sense of heat, a burning pain in the rectum, or griping, purging, and sickness. Of course the patient ought to be narrowly watched, and the medicine relinquished when these symptoms come on. When these symptoms subside, we may recommence the medicine, if necessary.

On the subject of *fistula in ano*, Sir B. Brodie makes some remarks which throw rather a new light on the cause of the difficulty in healing the abscesses in the neighbourhood of the anus. It has generally been supposed, till lately, that the healing process was prevented chiefly by the irregular action of the sphincter and levator ani muscles: this opinion, however, is now found to be incorrect. The true reason seems to be some ulceration in the mucous membrane of the bowel, within a short distance of the anus. We know that an ulcer may simply perforate the mucous membrane without penetrating through either the muscular or peritoneal coats; or it may perforate through the mucous and muscular only, or through all three. Sir B. Brodie thinks that fistula in ano arises originally from ulceration of the mucous membrane, extending through the muscular tunic into the cellular membrane external to the intestine. This is of the greatest importance to know, not only in a pathological but in a practical point of view; because if in all, or most cases, there be an ulcer of this nature it is evident that an operation will be of little use, unless the small ulcer situated more or less up the bowel be discovered and included in the operation. Sir Benjamin says he is persuaded "that the inner opening always exists; and he never fails to find it when he feels for it in the right place, which is generally, if not always situated immediately above the sphincter muscle, just the part where the fæces are liable to be stopped, and where an ulcer is most likely to extend through both the tunics." The most common cause of abscess of this kind is the lodgment of hard fæces in the bowel; by the straining which is necessary to expel them the mucous membrane is torn or abraded, and then the passage of the fæces causes ulceration. Although the internal ulcer is generally just above the sphincter, the abscess will often extend

much higher, a probe may pass for one, two, or even four inches up the side of the bowel. There may also appear to be more abscesses than one, there being several openings externally, but it is important to know that the whole cause of the mischief is the one ulcer just above the sphincter, which is perpetually allowing bits of fæces to escape through it, and thus keeps up the mischief. Cases are recorded in which the internal orifice has evidently healed up as the fistulæ have healed. This has occasionally been accomplished by the long continued use of Ward's paste, the confectio piper. nigr., which acts as a stimulus to the part, and may eventually cause the ulcer to heal. But the great art of curing fistula seems to consist in finding the small ulcer which has given rise to the disease. This opening is too often looked for in the upper part of the sinus, which, if high up, is never the proper place to find it. It must be sought for immediately above the sphincter muscle. To find this opening it is better also to use a probe with a flat handle, so that we may know in which direction we are pushing it when bent: it is better also to have probes of different sizes. In feeling for the internal orifice we should pass the finger into the rectum, and just above the sphincter we shall often find a little irregularity, which is the place where the orifice is probably placed. The probe, which ought to be grooved, is then to be introduced into the external wound, and by a little manipulation the opening into the rectum will be found. The probe may now be passed into the bowel, and by means of the finger its point may be brought out at the anus, taking care to have the groove of the probe downwards, or in such a direction that the scissors or knife may be easily guided along it. Sir Benjamin Brodie generally makes use of a pair of curved knife-edged scissors to divide the parts. It has long been supposed necessary, when the abscess extended to some distance up the side of the bowel, to lay open the whole sinus into the rectum; but this may be a frightful operation; it is not known what vessels may be divided, and it is altogether an unnecessary operation, as the case will generally be cured by simply finding the internal ulcer, and dividing all the parts between that and the skin, in the way just recommended. (65.)

The variety of methods recommended to treat vesico-vaginal fistulæ would almost puzzle us to know which to select as the best. A great deal would of course depend upon the size of the orifice: a large one, it has hitherto been a most difficult thing to cure. Dr. Keith, of Aberdeen, has had a very singular case which may be a means of suggesting some practical improvement in those cases in which all the ordinary methods have failed. His patient had such a large fistula of this kind, that for seven years she plugged it with a *pint bottle cork*, and was thus enabled to pass her time with comparative comfort. The cork, however, at last slipped into the bladder, and the urine again passed through the orifice. After a time, however, she began to suffer from symptoms of stone, and this body seemed to act like a *bullet valve* to the fistula, for the urine again began to pass by the urethra, and the fistula in about nine months became consider-

ably contracted in diameter. She suffered so severely from the stone, however, that it was necessary to crush, and evacuate it. The urine again passed through the fistulous orifice, which, however, had become sufficiently small to allow of a button-headed cautery, at a white heat, to be applied so as to cause a slough, including the edge of the false opening all round. This checked the passage of urine, and in six days the cautery was re-applied, and again in sixteen days. In three weeks there was an oozing of urine and the cautery was again applied as before. This cured the case completely. From observing the peculiarities of this case, Dr. Keith suggests that in those large fistulous orifices, which are too wide to expect success from cauterization, we should employ some artificial bullet-valve of a smooth and unirritating nature, and of sufficient weight to keep the orifice blocked up from the bladder, so as to favour the contraction of the edges of the wound, and for this purpose he recommends a small thin bulb or bag of Indian-rubber, filled with mercury. Should incrustation happen in the progress of the cure, a squeeze with a screw lithotrite, or percussor, or a long œsophagus forceps would throw it off, and at last when the opening had contracted to such a size as to admit of its ready cure by the cautery, the thin bag could be easily burst or punctured, and then withdrawn by the urethra. In a former volume we referred to Mr. Liston's practice of allowing a long interval to elapse between each cauterization, in order to give the parts after each operation a fair chance of contracting as much as possible: and we know, from examples of burns, to what a long period contraction may be continued if left alone. This, however, will be chiefly required when the orifice of the fistula is large, as in the above case of Dr. Keith's ; and we think that if his suggestion could be carried out, a great deal of time and misery might occasionally be saved ; as it will be seen that in his case a fistula contracted in less than nine months from the size of a pint bottle cork to that of a No. 16 bougie. (66.)

One of the most difficult diseases to cure is, perhaps, a real conical cornea, in which its normal convexity is lost; "it consists of a transparent conical structure, apparently differing in no particular from the natural texture of the cornea, which is preceded and attended by no pain or inflammation ; the cornea is prolonged forwards, and presents to the observer a peculiar dazzling, sparkling point of brilliancy, a dew-drop, or gem-like radiance, as though a piece of solid crystal were embedded in its centre." The treatment adopted by different practitioners has been exceedingly various ; leeches, calomel, evacuation of the aqueous humour, constant and well directed pressure, breaking up of the crystalline lens, the use of a strong lens, and other means have in vain been tried to remedy this defect, and it is certain that until the external form of the cornea be changed, until this conical projection, be it a solid cone, or a hollow one, be got rid of, or nearly so, the pencils of light incident to the upper portion of its suface must be unduly refracted, producing excessive and irregular convergence and consequent confusion in the direction of the rays of light. Mr.

Middlemore hit upon a very ingenious contrivance to remedy this defect—he made an artificial pupil in another part of the iris near its margin, where the least change of structure had occurred. This suggestion has often been attributed to Mr. Tyrrel, but it will be found in Mr. Middlemore's excellent Treatise on the Eye, published in 1834: and although too frequently attended with only partial success, it was occasionally very useful.

In Dr. Pickford's masterly treatise on this subject, which will be found embodied in article 65 of this volume, he points out his own mode of practice in some very interesting cases. This practice is founded on the suggestion of Mr Guthrie, in the London Medical and Surgical Journal, and in his lectures in 1832; and consists in the long continued use of emetics and purgatives. A scruple of sulphate of zinc, combined with half an ounce of Epsom salts, may be given every morning, and continued, if necessary, for 12 months: or a single grain of tartarized antimony may be substituted for the sulphate of zinc. The zinc, however, is to be preferred. If the disease depends upon some disturbance in the functions of the great sympathetic, spinal nerves, and par vagum, as Dr. Pickford supposes, producing faulty action of the nutrient capillaries and absorbent vessels of the cornea, these remedies will probably answer in many cases. (65.)

Mr. Wilde, of Dublin, has written a most excellent treatise on the causes and treatment of otorrhœa, chiefly dwelling on the affections of the external tube and external surface of the membrana tympani. There are few diseases which are more frequently neglected and carelessly treated than those of the external ear; and few which, when allowed to proceed, entail more inconvenience on a patient during the remainder of his life. In simple otorrhœa Mr. Wilde paints over the surface with a solution of nitrate of silver, ten grains to the ounce, applied with a fine camel's hair pencil, either to the whole or a portion of the surface according to the extent of the disease. This is repeated every third day, and in the interval the ear is syringed night and morning, and oftener if the discharge is copious, with plain tepid water, by means of a gum elastic bag, which, when used by friends, is much preferable to the usual piston syringe,* and at night a slightly astringent lotion is dropped into the ear till it fills up the meatus, and allowed to remain there for a few minutes. For this purpose we may use Liq. Plumbi Diacet ℥i. to one ounce of water or rose water; or weak solutions of alum, copper, or chloride of lime. But otorrhœa is often exceedingly difficult to cure, owing to its being caused by morbid vascular growths, such as granulations on the membrana tympani, which are allowed to proceed undiscovered. In such a case the part appears quite red and vascular, and Mr. Wilde recommends the application of the solid nitrate of silver, rubbed over the part about every second day, or oftener if

* This may be procured of Mr. Robertson, 15, Jervis-street, Dublin, or any surgical instrument maker.

necessary ; and for this purpose he uses a very neat little instrument which is five and a half inches long, consisting of a silver tube, cut spirally for three fifths of its length, and having an aperture on the side near the extremity. In using this *port-caustic*, a little nitrate of silver is melted over a lamp on a small platina ladle, and then, when about cooling, the end of the *port-caustic* is dipped into it till the aperture and extremity are filled and coated over with the caustic. We often find, however, that discharges from the ear are kept up by polypi, which it becomes necessary to remove ; and for this purpose Mr. Wilde recommends a little instrument, first recommended, we believe, by Mr. W. Robertson, surgeon to the Kelso Dispensary. It is a small snare-like apparatus, consisting of a fine steel stem, with a moveable bar sliding towards the handle. It is so constructed that a noose made of fine silver or platina wire may be pushed down to the polypus, so as to surround and ensnare it. The morbid growth may thus be safely and cautiously taken away, either in part or wholly, and by the regular application of the armed *port-caustic* from day to day, all trace of the growth may ultimately be extinguished. (68.)

It is interesting to observe the zeal which many of the German surgeons show in the cultivation of ophthalmic surgery. We hear now of an opaque cornea being improved by the superficial layers being excised. Dr. Gulz and Professor Rosas have recorded cases in which this operation was in a great measure successful, and it is possible that their skill and experience may enable them to make the operation more generally successful. It is, of course, of the greatest consequence that the cases be proper for such a proceeding. In 1833, Rosas removed several of the layers of the cornea; and in 1841, Dr. Gulz was remarkably successful in a similar operation. The eyelids being fixed, the cutting consisted in the continuous and repeated introduction of the knife, following the motion of the eye ball, through the external layers, so gradually approximating the internal parts of the cornea. The transparent layers of the cornea were at length reached; it was then, by the use of different instruments, bared to the extent of a line and a half in diameter, the innermost layers being fortunately uninjured throughout, and consequently the anterior chamber of the aqueous humour remaining unopened. The patient could see the hands of a watch, although the cornea had been previously quite opaque: but inflammation took place in four weeks from some accidental circumstances and nearly destroyed the good effects of the operation. This, however, was subdued and the patient continued to see very tolerably. (69.)

Dr. Keith has advanced some opinions on the operation of lithotomy, which appear to deserve the attention of operating surgeons. Even in the first incision he thinks that many good operators commit an error in going too near the symphysis pubis, the consequence of which may be, that when the stone is grasped in the forceps, it is driven out of the hold of the operator by coming against the arch

of the pubes, and he cannot, as he ought, draw downwards, because the incision is not low enough. With this difficulty in view, most surgeons now make the first incision as far as is safe from the symphysis pubis; and Dr. Keith seems to extend this incision quite as far as he is warranted past the side of the rectum. But the most important incision is the deep one; and in using his peculiar instrument, Dr. Keith was influenced by the fact, that the success of all the most fortunate lithotomists has depended upon the narrow limit to which they restricted themselves, in dividing the neck of the bladder. His instrument is a "gorget neither blunt nor sharp—an edge on it that behoved to cut through a substance so solid as the prostate gland, yet so blunt that such a tough elastic membrane as the bladder would stretch upon its edge." When the perineum is very shallow, this gorget will not be required, the bladder may be entered and the prostate notched by a knife, long in the handle and short in the blade, with its cutting edge limited to an inch and a quarter from the point; but in most cases it will be necessary to slit the neck of the bladder and prostatic urethra obliquely downwards and outwards to about half an inch, and then Dr. Keith brings his gorget into use to finish the operation. This instrument has its left edge quite rounded, the other ground to an edge, and then blunted with a file; the point well rounded into a blunt button—a copy, in fact, of "Cheselden's Conductor." Dr. Keith says that by these means he insures a positive entrance into the bladder, "obviating the chance of merely dilating the *sphincter vesicæ*, as Cheselden and Martineau are alleged to have often only done; and avoiding the cutting of parts that never should be cut." (70.)

In cases of fistula lachrymalis, Dr. Parrish, of Philadelphia, recommends us to place more reliance on dilatation than we are at present accustomed to do. He thinks that as dilatation is so successful in stricture of the urethra, the same principle ought to be adopted in these cases. Instead of using fine cat-gut, as recommended by Beer, or other means mentioned by various authors, Dr. Parrish uses a bougie made of waxed linen, which he can have made of any size. It is made by dipping a piece of fine linen into white wax, in a melted state, and suddenly withdrawing it. It is then allowed to cool, and cut into portions which, when tightly rolled, form a bougie of any size which may be required. This kind of bougie may be cut or bent with great ease, and be made smaller by unwrapping, without the necessity of having a great number of sizes already prepared. After reducing the inflammation round the fistulous sore, Dr. Parrish introduces one of these fine bougies down to the strictured part, and there secures it by adhesive plaster to the external parts. This may be removed in a day or two, and again introduced, or a larger one may be used, if possible, so as to dilate the fistulous orifice, and to induce a more healthy action in the mucous surface of the sac and duct. By perseverance, the bougie may ultimately be made to pass through the whole extent of the canal, and after this, bougies of larger size may cautiously be persevered with till the duct be sufficiently dilated. (76.)

There are few subjects in surgery with which the practitioner ought to be better acquainted than the treatment of stricture. He daily meets with it in practice. The patient will generally perceive the evil gradually increasing, and at last he will only be able to make water in very small quantity at a time, and probably always leave a large portion in the bladder, which gives rise to the frequent desire to empty it, followed by increased efforts. Mr. Phillips pursues a simple and an efficacious mode of treatment in many of these cases. Instead of introducing a bougie, and insinuating it into the stricture, which is too often a very difficult operation, especially when the strictured part will not admit the smallest sized gum elastic instrument, he uses a moderate sized instrument from the first. He passes it down to the strictured part, and directs the patient to keep it firmly in contact with the stricture for an hour, if he can bear it comfortably; if not, for a shorter period. In some cases, by the end of an hour, the instrument will pass on to the bladder, in others it has to be repeated three, four, five, or six times; but it will generally succeed at last. The instrument, however, should not afterwards be introduced too often, perhaps once a day will be sufficient. It may happen that it cannot be again introduced for some days, owing to the irritability of the part, and then the stricture will be found disposed to return. The affection, in short, requires to be watched for a considerable period, and even when apparently cured a bougie ought to be passed occasionally to ascertain that the stricture is not increasing. But the pressure of a bougie will often fail in removing the indurated matter which causes stricture. With care and perseverance, however, the patient may pass the rest of his life with comfort. Mr. Phillips' opinion of the relative value of dilatation and cauterization in these cases seems judicious. We must remember that "the mucous surface itself is not much changed at the contracted point; that the indurated product is fairly and altogether outside of the mucous surface, very much limited to the submucous tissue, but continuous with the adherent portion of the mucous tissue;" so that if the caustic be used too freely it may only injure the mucous membrane. There is no doubt that its moderate use diminishes materially the sensibility of the surface, and enables us to use dilatation with more effect and freedom: but after all Mr. Phillips thinks that the best plan to pursue is the prudent employment of dilatation; and he considers that the benefits which have followed the use of caustics have been more owing to the bougie and porte-caustiques employed at the same time, assisted, no doubt by the irritation exciting the absorption of the morbid product. (80.)

Mr. Tuson has published some cases to show the value of certain preparations of chlorine in cancerous affections. The use of chloride of zinc externally is well known, but Mr. Tuson administers it internally: he also places confidence in the chloride of lead, and other chlorides given internally. In one case which he publishes there was an extensive cancerous disease of the right breast and neck, which was treated unsuccessfully for a long time, till a paste

was applied, made of one part of chloride of zinc and three of flour; this was well mixed and moistened with water, and then applied over the whole of the ulcerated parts. The chloride of zinc was also given internally: half a grain was ordered every morning in a wineglassful of caraway water. The chloride of zinc paste was applied again, and when the slough separated, the ulcerated surface healed kindly. The cancerous disposition continued for some time, and the dose of the metal was increased to three-quarters of a grain, and continued for two months. The improvement, although very striking, was not permanent, as the patient suffered a relapse, which ended fatally. The case, however, was sufficient to show that the treatment had made considerable impression on the disease, and especially in healing the open cancer, which Mr. Tuson has found to be the result in several other cases. A solution of one drachm of the chloride of zinc to a pint of water injected upon a cancerous ulcer, or applied with linen rags, will be found a very useful application. Another case is related in which the *chloride of lead* was used. The case was one of large, irregular, open cancer of the right breast, extending deeply into the axilla, so that the pulsation of the vessels could be seen, with a foul, yellow, excavated surface, copious discharge, with much fetor and severe pain. A solution of the chloride of lead (one drachm to a pint) was ordered to be applied and kept constantly wet; and ten grains of chloride of potassium were administered in caraway water three times a day. Under this treatment there was considerable improvement. The solution of chloride of zinc was afterwards substituted for the lead, and although, as in the other case, the result was unfavourable, the life of the patient seemed to be prolonged. The relief, also, is sometimes very great, arising probably from the application acting upon the nerves, and paralysing them. The same relief may be procured from the ointment in some hysterical affections of the breast, or nervous irritability of the gland, and in some cases where a tumour may be pressing on or involving a nervous filament. The ointment may be made with one drachm of the chloride of lead, and one ounce of common cerate. (81.)

In one of the meetings of the Westminster Medical Society, Mr. Fisher refers to the practice of treating scald head, ring worm, &c., in Brussels. This is by an ointment chiefly composed of wood soot. The common soot of the chimney is collected, placed in a quantity of water, and macerated by a gentle heat for four days; the fluid is then strained and evaporated in an open vessel to the consistence of treacle. An equal portion of this and common lard are then mixed together and applied to the part affected night and morning. The head is shaved occasionally and thoroughly washed every third day. It is supposed that the efficacy of this ointment depends upon the creasote and pyroligneous acid which it contains; and, no doubt, as Dr. Sayer observes, the good effects of the treatment may in some measure depend on the soap, which is used in Brussels, containing more alkali, than that of England. Twenty-nine years ago, Dr. Sayer observes, that the ointment then used in Brussels with so much

efficacy, consisted of equal parts of charcoal, so burnt as to retain its pyroligneous acid, nitrate of potash, and common brimstone, worked up with hog's lard into an unguent, and applied night and morning. The head was, moreover, washed daily with the soft soap containing a great quantity of alkali, and shaved every fourth day. (82.)

Dr. Oke, of Southampton, has contrived a very ingenious tourniquet which enables the surgeon to press upon almost any one artery, without at the same time compressing the whole limb and obscuring the operation by venous blood. It consists of an arch, a pad, and a screw. The arch embraces the limb, and the pad is so placed that by means of the screw, it can be made to press upon any particular part, more effectually than when the surgeon makes use of an assistant's finger, a key, or any other such contrivance. The instrument will probably be improved by Mr. Weiss. (85.)

A singular case is related in the Philadelphia Medical Examiner, of a needle having been accidentally pushed into the right breast, and gradually working its way into the substance of the heart. This is not the first case in which such a substance has passed from one part of the cellular tissue to another, and to a very distant part, but we do not at present remember a case in which a needle or any other penetrating body was found to enter one of the internal organs. On opening the left ventricle, the point of the needle was seen protruding a quarter of an inch towards the middle of the cavity. The needle had passed at the under surface of the heart about three quarters of an inch from its apex, and half an inch from the septum, through the wall of the right ventricle, through the septum, and into the left ventricle. (88.)

In the rhinoplastic operation, when one piece of skin is transplanted, as it were, to another locality, the connecting portion is generally severed, when union of the transplanted portion has taken place, and the consequence too often is, that the nose, for example, is a poor, shrivelled appendage, owing to the new vessels not being sufficient to keep up vigorous life in the part. Dr. Keith therefore recommends that the connecting slip be allowed to remain undivided for a much longer time than is generally done, and even left undivided altogether. (89.)

In the treatment of syphilis the practitioner may now be almost at a loss in his choice of the different preparations of mercury, iodine, sarsaparilla, &c. Almost every author who has written on the subject has proposed some favourite preparation of his own. All or most, however, have come to the conclusion that mercury, in one form or another, ought always to be employed, when the constitution of the patient will bear its influence. There may not be so much difference of opinion in the treatment of primary, as of secondary syphilis. In the former case, most surgeons now agree to destroy the affected spot if possible, before pustulation has taken place, and if this have already occurred, which is almost always the case before the surgeon is consulted, he thinks it right to mercurialize the patient for a cer-

tain length of time. Sir Benjamin Brodie, in his late lecture on this subject, directs our attention to the different non-mercurial methods of treating the disease by eminent surgeons, most of whom eventually relinquished their opinions and were obliged in private practice to employ a stated course of mercury, in order to prevent secondary symptoms, &c.

For the secondary cutaneous affections, a good preparation is the bichloride of mercury as recommended by Mr. Phillips, in doses of from one-twelfth to one-sixth of a grain twice or three times a day, associated with sarsaparilla. It is stated, however, that when this preparation is used, the secondary symptoms are strongly disposed to recur, and it has to be re-administered, sometimes for more than one or two attacks. Its good effects, however, are so rapid, and especially when the mucous surfaces are affected, that the surgeon is, perhaps, too apt to forget its evanescent powers. On this account it is better to employ a combination of iodine and mercury—the proto-iodide of mercury—which affects the system almost as rapidly as the bichloride, without being attended with its evanescent effects. It may be given in doses of one grain daily, till the system is more or less affected. Mr. Phillips says that this medicine is more prompt in its action than any other preparation, except the bichloride, and that its effects are more permanent.

Another most valuable remedy in secondary syphilis is the iodide of potassium, and also the decoction of sarsaparilla.

Some practitioners have asserted with considerable plausibility that other medicines which have a powerful action on the capillary system, have the power to throw off the poison of syphilis, when it is producing secondary symptoms.

Mr. Smee, it will be remembered, assigns this power to tartarized antimony, in an interesting paper published in Retrospect, vol. 6, p. 187. Perhaps the same result might attend the administration of arsenic in some cases where the preparations of mercury could not be tolerated, and where milder medicines have proved to be ineffectual, as in some forms of syphilitic ulcerations. In a case of dreadful syphilitic ulceration of the palate, Fowler's solution was found of great service, commencing with three drops, and gradually raising the dose to thirty. In a well marked case of scirrhus of the mamma also, the ioduret of mercury has been found to exercise a marked influence.

It is, perhaps, easier to know when we ought to administer mercury than when we ought not. In persons of a scrofulous disposition for example, who are disposed to phthisis, it requires the greatest discrimination: in such a case, however, we may be obliged to give it, knowing how frequently tubercles are developed in the lungs after any morbid poison has been circulating. This result may consequently follow an attack of syphilis as well as an attack of measles, scarlatina, or small pox. Sir Benjamin Brodie prefers mercurializing a patient by *inunction* to any other way, when the case is severe and when the process is

not inconvenient to the patient. It gripes and purges less than any other form, and is said to cure the disease a great deal better. Sir Benjamin even expresses his opinion of this method as follows: "It does not damage the constitution half so much as mercury taken by the mouth; nay, I will go so far as to say that, except in very slight cases, you really cannot depend upon any mercurial treatment effecting a certain cure or even giving a good chance of it by any other means than inunction. You may very often patch up the disease by giving mercury internally, but it will return again and again, and you may cure it at last by a good course of mercurial ointment." In such a case he recommends that the ointment be rubbed in at first before the fire for three-quarters of an hour at a time, and afterwards for a shorter time; the patient taking great care not to expose himself to cold. Sir Benjamin further states that we ought not to leave off the mercury as soon as the sore has healed, but to persevere in it till the hard cicatrix has disappeared. In short, he recommends us rather to recur to the old practice of using mercury in abundance, and warns us against using it too slightly, according to some modern notions. He says, "you must not suppose that we have made an advance in all departments of surgery; on the contrary, I am sure that in some we have gone back. I am satisfied that the mercurial treatment of syphilis, as employed by the late Mr. Pearson, during a great part of his life, was as nearly perfect as possible, and it was much more successful than the less careful treatment of modern practitioners." Sir Benjamin's method of using mercury in children, is, in our opinion, very judicious, as it prevents most of the griping and purging which follow the internal use. He spreads the mercurial ointment, made in the proportion of a drachm to an ounce, over a flannel roller, and binds this round the child once a day. The child kicks about and the cuticle being thin, the mercury is absorbed. (117.—118)

On the subject of removing diseased ovaria, we shall at present say but little. We find so many different opinions on the subject recorded in the medical journals, that it will only be possible to come to a just or tolerably correct opinion on its legitimacy, when more cases have been recorded. We may say, however, that the feelings of the most eminent men in the profession are against having recourse to the severe proceedings which have lately so often been adopted, and the record of cases is so far unfavourable up to the present time, that we suspect the operation will ultimately be discountenanced, both by the public and the great mass of professional men. We have no doubt, however, that there have been many cases in which the results have been highly encouraging, but it is more than probable, that out of the 40 or 45 cases which have hitherto been published, the sum of human life and happiness has not been increased, but diminished. (125.)

We have omitted to refer in this recapitulation to many excellent articles in the foregoing pages. But these will be found to be already as much condensed as is consistent with their utility.

INDEX TO VOL IX.

PAGE.

ACUPUNCTURE use of, for the Consolidation of Fracture 258
Albuminuria, on, by Dr. Heaton 13
Aldridge, Dr., on urinary disease 8
Allnatt, Dr., on Cochineal in Hooping Cough... 94
Ammonia, muriate of, use of, in neuralgia 47
——————— in, Germany 120
Aneurism, treated by Compression 195
———, operation for, by Mr. R. Hey 197
———, of the aorta, by Dr. Law 242
Anisodus Luridus, action of, on the pupil 119
Anthelmintic, ol. Santonicæ as an 101
Antidotes, on different, by Messrs. Bouchardat & Sandras 98
Do. Do. 108
Asphyxia, treatment of, by Dr. Shearman 38
———————, by Mr. Bree 40
——————— in infants, by Dr. Doherty 49
Asphyxia causing inflammation and gangrene of the Lungs, by Dr. Heaton 82
Arsenic, use of, in neuralgia 48
———, its tests and antidotes, by Dr. Shearman 76
Arsenic, Devergie's solution of 119

Beatty, Dr., on the effects of ergot of rye on the fœtus 267
Belladonna in dysmenorrhæa 104
Bennet, Dr. H., on large doses of nitrate of potash in rheumatism 26
Benzoin Water, on 128
Bird, Dr. G., on the tests for diabetic urine 21
Breast, on Cancer of, by Sir B. Brodie 156
———, on removing tumours from 161
Brodie, Sir B., on various subjects 129
Bronchitis, use of naphtha in, by Mr. Proctor... 46
Bubo and Chancre, Ricord on 262
Do. 264
Buchanan, Dr., on maxillary abscess 265
Bunion, treatment of, by Mr. Humpage 259

Calculi, new instrument for Crushing 218
Camphor, effects of, by M. Raspail 97
Cancer of the Breast, on, by Sir B. Brodie 156
———, use of chlorine in, by Mr. Tuson 233

PAGE.

Cantharides, the acetous extract of 116
Cartilaginous bodies in joints, treatment of, by Mr. Lister 256
Cautery actual, in gangrene of the face 253
Chancre and Bubo, Ricord's treatment of 262
Chalk, Mr., on cod's liver oil 75
Christison, Dr., on the urine 17
Chlorine, effects of, in cancer 233
Clendon, Mr. Chitty, on extracting bodies from the ear 251
Cochineal in hooping cough 94
Cod's liver oil in Scrofula, by Mr. Chalk 75
Colchicum, rules for the use of, in gout 61
————, use of, in rheumatism, by Dr. Monneret 79
————, obstetrical properties of 282
Consumption, use of naphtha in, by Mr. Wilson 41
————————, by Dr. Hastings 45
————, infrequency of, in marshy countries 113
Contagion, on, by Dr. Thompson 96
Copaiba sugar plums 105
Corfe, Mr., on poisoning by opium 108
Cormack, Dr., on extirpating diseased ovaria 276
————, on the dark abdominal line after delivery 278
Cornea conical, on, by Dr. Pickford 174
————, on excision of the layers of, in opacity 180
Cornea, opacity of, prussic acid in 246
————————, chloride of zinc in 247
————, ulcers of, chloride of zinc in 247
Counter-irritation, on immediate, ... 258
Croton oil, in the cure of Nævi 247
Croup, tracheotomy in 250
Crompton, Mr. S., opinion of the Ovarian operation 277
Curling, Mr. on diseases of the Testis 248

Delirium, musk in certain cases of 107
Delirium tremens, on, by Dr. Watson 100
Delivery, the dark abdominal line as a sign of 278
Dentition, scarifying the gums in, by Dr. M. Hall 125
Diabetes on the tests for, by Dr. G. Bird 21
Digitalis in disease of the Heart 126
Doherty, Dr. R., on asphyxia in infants 49
Dysmenorrhœa, Belladonna in 104

Ear, on discharges from, by Mr. Wilde 229
——, on extracting bodies from, by Mr. Clendon 251
Electricity in poisoning by laudanum 108
————, use of, in incontinence of urine and enuresis 115
———— in poisoning by strychnine 116
————, effects of, in paralysis, by Dr. Shearman 123
Empyema, diagnosis of, by Mr. Mac Donnell... 1
Entropium and Trichiasis, on, by Mr. Wilde 165
Epilepsy and Mania, use of digitalis in 92
Ergot of Rye, in retention of urine 87
Ergotine, on 90
Ergot of Rye, in pulmonary hæmorrhage 91
Erichsen, Mr., on the introduction of air into the veins 206

PAGE.
Ergot of Rye, effects of, on the fœtus, by Dr. Beatty... 267

Fergusson, Mr. on the operation for hare-lip 257
Fever, Puerperal, caused by contagion, by Mr. Storrs, &c. 269
Fistula in ano, on, by Sir B. Brodie 140
Fistula, vesico vaginal, on, by Dr. Keith 164
———, lachrymalis, treatment of by dilatation, by Dr. Parrish ... 215
Fractures of the forearm, on the best position for 239
——— of the lower end of the radius, on the diagnosis of, by Mr. Lonsdale 252
Fracture, use of acupuncture for the consolidation of 258

Gangrene of the Face, Mr. Obre on 253
——— of the intestine in hernia, on 259
Gout and Rheumatism, treatment of, by Dr. Todd 59
Griffith, Dr., on the effects of re-agents on urinary deposits... ... 15

Hall, Dr. M., on the diagnosis in cases of paralysis of the face ... 56
———, on dentition 125
———, on curvatures of the spine 199
———, on sterility 280
Hamilton, Dr. R., on excision of the layers of the cornea 180
Harelip, on the operation for, by Mr. Fergusson 257
Hastings, Dr., on naphtha in phthisis 45
Heart, on rheumatic affections of, ... 65
———, digitalis in diseases of 126
Heath, Mr., his case of extirpation of the womb 277
Heaton, Dr., on albuminuria 13
———, on the effects of asphyxia on the lungs 82
Hernia, opium in, by Mr. Walker 256
———, treatment of gangrenous intestine in 259
———, new truss for, by Mr. L'Estrange 260
Hey, Mr. R., on aneurism of the external iliac 197
Hocken, Dr. O., on mercury and iodine 28
Houston, Dr., on ergot of rye in paralysis of the bladder 89
Hooping Cough, cochineal in 94
Hæmoptysis, ergot of rye in 91
Hæmospasic method of treatment 109
Hunt, Dr. H., on arsenic in neuralgia 48
Hydropathic treatment, on the 71
Hypertrophy of the Heart, effects of starvation on 95

Intermittent Disease, on, by Dr. Mayo... 34
Intestines, on uniting wounds of the 261
Iodide of Potassium, use of, by Dr. Oke 84
Iodine and Mercury, on the respective value of, by Dr. Hocken .. 28

Jesse, Mr., on hæmorrhage after amputation 247
Johnson, Dr. J., on rheumatism and neuralgia 265

Keith, Dr., on vesico-vaginal fistula 164
———, on lithotomy 185
———, on improving the rhinoplastic operation 244

PAGE.

Kidneys, affections of, by Dr. Aldridge 8
———————, by Dr. Heaton 13

Law, Dr., on aneurism of the aorta 242
Liebig's theory of Gout, arguments against, by Dr. Todd 66
Lonsdale, Mr., on fractures of the radius 252
Liston, Mr., on aneurism treated by compression 195
———, on cartaliginous bodies in joints 256
Lithotomy, remarks on, by Dr. Keith 185
Little, Dr., on curvatures of the spine 202
Lungs, inflammation and gangrene of, caused by asphyxia 82
L'Estrange, Mr., on a new truss for hernia 260

Mac Donnell, Mr., on the diagnosis of empyema 1
Mania and Epilepsy, use of digitalis in 92
Mayo, Dr., on intermittent disease 34
Measles, use of nettles in 114
Mercury and Iodine, on the respective value of, by Dr. Hocken ... 28
Montgomery, Dr., on the dark abdominal line as a sign of delivery 278
Mercurial ointment, on the preparation of 116
Mercury, use of, in syphilis, by Sir B. Brodie 153
Musk, in certain cases of delirium 107
Naphtha, use of, in phthisis 41
———————, in bronchitis 46

Needle, case of, entering the breast 243
Neuralgic affections, on 46
Do. Do. 117
Neuralgia, use of sulphur in 265
Nitre, use of, in Rheumatism 26
Do. Do. 79
Nose, on artificial, by Dr. Keith 244
Nævi, treated by croton oil 247
——— of the eyelids, treatment of 251

Obre, Mr., on gangrene of the face 253
Oke, Dr., on different pains of the loins 69
———, on the effects of iodide of potassium 84
———, on the arch tourniquet 241
Opacity of the Cornea, treated by excision of its layers 180
Opium, poisoning by, treated by electricity 108
———, use of, in hernia 256
———————, in hernia humoralis 257
Ovaria, different opinions on the extirpation of 271
———, curious case of disease of the, by Mr. Tutin 282

Paralysis, treated by electricity, by Dr. Shearman 123
———, on some forms of, by Sir B. Brodie 138
——— of the nerves of the face, on, by Dr. M. Hall, ... 56
———, effects of strychnine in 118
Parrish, Dr., on fistula lachrymalis 215
Patersone, Mr., on the use of prussic acid on the cornea 246
Periosteal disease, iodide of potassium in, by Dr. Oke 85
Phillips, Mr., on stricture 227

PAGE.

Phthisis, (see consumption) ... ...
Pickford, Dr., on conical cornea 174
Piles, on the treatment of, by Lisfranc... 217
———————— by Mr. Druitt 242
Polypus of the nose, on, by Sir B. Brodie 129
———— of the ear, by Mr. Wilde 223
———— of the womb, on removal of 258
Pommades for chaps and fissures, &c. 266
Potassæ liquor, effects of, by Sir B. Brodie 162
————, combined with potassæ iodidum 249
Potassæ liquor in inveterate skin disease 261
Potash, nitrate of, in rheumatism 26
Do. Do. 79
Proctor, Mr., on naphtha in bronchitis 46
Prussic acid, use of, in opacity of the cornea 246
Pupil, artificial, made in the superior eyelid 252

Quackenbush, Dr., on the removal of uterine polypi 258

Rheumatism, treatment of, by large doses of nitrate of potash ... 26
———————— and Gout, treatment of, by Dr. Todd 59
————, use of brimstone in 265
Rheumatic Fever, general treatment of, by Dr. Todd 63
————, treated by colchicum, nitre and bloodletting 79
———————— by iodide of potassium 86
Rhinoplastic operation, on the, by Dr. Keith 244
Ricord, on chancre and bubo 262
———————— 264
Ross, Dr. on ergot of rye in retention of urine 87

Salivation, treatment of sore mouth from 249
Santonicæ oleum, on, ... 101
Scalp disease, on 238
Sciatica, treated by irritation of the foot 117
————, treatment of 118
Scrofula, use of Cod's liver oil in, by Mr. Chalk 75
Sea side, effects of 120
Secale Cornutum (see ergot of rye) ... ...
Sevum, prepared 116
Sharkey, Dr., on the use of digitalis in epilepsy and mania 92
Shearman, Dr., on asphyxia 38
————————, on the tests and antidotes of arsenic 76
————————, on electro-magnetism in Paralysis 123
Silver, nitrate of, in suppression of urine 94
Silver, chloride of, effects of 117
Simpson, Mr., on a new instrument for crushing calculi 218
Skin, formulæ for diseases of the 102
Spina bifida, treated by repeated punctures 240
Spine, on curvatures of the 199
Stafford, Mr., on curvatures of the spine 205
Sterility, on, by Dr. M. Hall 280
Storrs, Mr., on puerperal fever 269
Stricture of the urethra, on, by Mr. Phillips 227
Strychnine, poisoning by, treated by electricity 116

PAGE.

Strychnine, in paraplegia... 118
Syphilis, treatment of, by inunction, &c., by Sir B. Brodie ... 153
———, prevention of contagion from 250
Sulphur, use of, in rheumatism and neuralgia... 265

Tartar Emetic on tardy labour 281
Testicle, swelled, opinion on, ... 257
Thompson, Dr. T., on contagion... 96
Tic Doloureux, (see neuralgic affections) ... ...
Tobacco, effects of 112
Todd, Dr., on the treatment of gout and rheumatism 59
———, on Liebig's theory of gout 66
Tongue, disease of, by Sir B. Brodie 135
Toothache, chloride of zinc in 247
Tourniquet, new kind of, by Dr. Oke 241
Tracheotomy, on, by Dr. Wilson 213
——— in croup 250
Tuson, Mr., on chlorine in cancer 233
Tutin, Mr., on ovarian dropsy 282

Urine, tests for diabetic, by Dr. G. Bird 21
———, retention of, treated by ergot of rye 87
———, case of suppression of, by Dr. Thompson 93
———, new researches on the, by M. Lehmann 105
———, incontinence of, treated by electricity 115
Urinary deposits, on, by Dr. Aldridge 8
———, by Dr. Griffith 15
———, by Dr. Christison 17
———, by Dr. Todd 59
———, use of benzoin water in 128

Veins, treatment after the introduction of air into 206
Veratria, preparations of... 123
Vienna paste, composition of 257

Watson, Dr., on neuralgia 47
———, on delirium tremens 100
Wilde, Mr., on entropium and trichiasis 165
———, on affections of the ear 220
Wilson, Dr., on tracheotomy 213
———, Mr., on naphtha in phthisis 41

Zinc, on the valerianate of 122
——, chloride of, in opacity and ulcers of the cornea... 247
———, in toothache 247

GENERAL INDEX

TO THE FIRST EIGHT VOLUMES OF

THE RETROSPECT OF PRACTICAL MEDICINE & SURGERY,

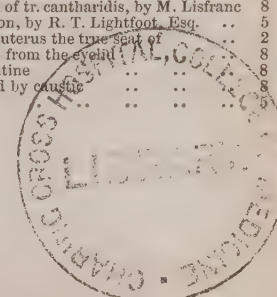
POINTING OUT THE PARTICULAR VOLUME AND ARTICLE IN WHICH INFORMATION ON ANY GIVEN SUBJECT MAY BE REQUIRED.

☞ Only the Volumes and Articles are referred to, as in the New Editions of many of the first Volumes the pages do not correspond with those of the First Editions. This General Index, however, does not include the Contents of Vol. 9. For this reason, if the reader wishes to refer for information on any subject, which may have been published within the last Six Months, he is requested to refer to the Index to Vol. 9.

	VOL.	ART.
Abdominal distention treated by the flexible tube; by Dr. Donovan ..	3	38
Abdominal neuralgia, depending on uterine irritation, by Dr. Golding Bird	7	10
Abscesses, chronic, on the subcutaneous opening of	5	73
Acetic acid in the treatment of tinea capitis	8	94
Accoucheurs, British and Continental, difference of opinion of, on various practical points	7	101
Aconite, tincture of, in neuralgia and chronic rheumatism, by J. Curtis, Esq.	4	14
——— in the treatment of neuralgia	1	28
Acids and alkalies, proportions for the saturation of, in extemporaneous prescriptions, by Mr. Scholefield	5	36
Acupuncture in the treatment of neuralgia	3	36
——— in the reduction of strangulated hernia	4	94
——— of the heart, a treatment for asphyxia	4	34
Adulteration of essential oils by alcohol, discovery of, by chloride of calcium	2	103
Æruginis, ungentum, in the treatment of burns and scalds	3	70
Æther, burning, a means of producing active counter-irritation, by C. J. Edwards, Esq.	5	34
Air, condensed, the application of, as a surgical remedy, by D. G. Krauss	8	79
——, injection of, in a case of ileus	3	27
Air, visible secretion of, from the cutaneous surface	3	15
Albumen, on the detection of, in urine, by heat and nitric acid, by Dr. Rees	3	21
Alkalies, proportions of acids for the saturation of	5	36
Alum in the treatment of Angina	4	8
—— in the treatment of painter's colic	5	12
—— in the treatment of hæmorrhage, by Dr. Lynch	4	9
Aloes, on the medical properties of, by Dr. Sigmond	2	94
Amaurosis cured by division of the muscles of the orbit, by M. Petrequin	4	84
——— treated by strychnia	6	62

	VOL.	ART.
Amaurosis, from pressure on the retina, by hydrophthalmia, treatment of, by oil of turpentine, by Dr. Hocken	5	64
Amadon for compresses, plasters, &c.	5	70
Amber in anomalous nervous affections	5	46
Amenorrhœa, treated by electricity	3	2
——— leeches to the knee joint, by M. Trousseau	5	21
——— various remedies, by T. W. B. Kirkby, Esq.	6	23-4
——— do. do. by Dr. Cowan	8	3
Ammonia, in the treatment of diabetes	8	38
Ammoniacal gas, inhalation of, as a medical agent, by A. Smee, Esq.	7	23
Amnion, case of dropsy of the, by J. Toogood, Esq.	4	101
Amputations at the ankle and other joints, by James Syme, Esq.	7	60
———, circular and flap, comparative advantages of, by R. Alcock, Esq.	4	63
———, Mr. Liston's mode of performing, and of dressing the stump, by J. P. Potter, Esq.	5	54
Anchylosis, complete, cured by operation, by Dr. W. Gibson	6	52
———, danger of, from a continued use of an immoveable apparatus in the treatment of fractures	4	86
Aneurism of the external iliac artery, operation for, with use of Mr. Trant's needle, by Dr. Bellingham	7	57
———, false, on a variety of, by R. Liston, Esq.	7	71
———, on the cure of, by compression, by Dr. Bellingham	8	68
———, popliteal, cured by compression	7	89
———, ———, mode of passing the ligature in, by B. Cooper, Esq.	5	58
Angina pectoris and other spasmodic affections, on the treatment of, by sulphur, by Dr. Munk	2	97
——— treatment of, by alum, by M. Velpeau	4	8
Animal heat, on the source of, by Professor Liebig	6	92
Ankle joint, on amputations of, by James Syme, Esq.	7	60
Antimony, potassio-tartrate of, in the removal of effusions into the synovial membranes	2	101
———, potassio-tartrate of, in the treatment of syphilis	6	49
———, in the treatment of mania, by Dr. Sutherland	8	33
——— and opium, in nervous fevers	7	2
——— and mercury, methods of forming various preparations of, by W. Tyson, Esq.	5	5
Anteversion of the uterus cured by position alone	5	90
Anus, fissures of, cured by injections of infusion of rhatany root, by M. Trousseau	3	68
Aphonia, treated by galvanism	8	45
Aphorisms of practical surgery, by M. Dupuytren	3	74
Apoplexy, from various causes, inanition, dyspepsia, gout, diseases of the heart, diseases of the capillaries, muscular efforts, by Dr. Marshall Hall	6	10
Arm presentation, case of, in which turning was impracticable, by Dr. Lynn	6	90
Arsenic, poisoning by, treated by the hydrated per oxide of iron	1	17
———, Dr. G. Bird	6	66
———, symptoms and tests of	4	14
———, Liq. Kali carbonici in cases of poisoning by	6	66
——— and mercury, hydriodate of, in the treatment of cancerous affections	1	48
Arsenic and mercury, hydriodate of, in the treatment of lupus and psoriasis, by Mr. Donovan	2	82
———, mode of preparing the solution of, by Mr. Donovan	4	51
———, on the effects of, by Dr. G. Osbrey	6	15
——— in diseases of the skin, by J. E. Erichsen, Esq.	8	2
——— in the treatment of syphilis	8	106
Arteries, upon the changes which occur after the application of ligatures to, by James Spence, Esq.	8	71
Artichoke, the, as an anodyne	8	39
Asphyxia, on the treatment of, after drowning, by J. Snow, Esq.	5	13

	VOL.	ART.
Asphyxia, after immersion during 14 minutes, successful treatment of, by continued frictions and heat, by Dr. Douglas	7	6
———, from drowning, treated by voltaic electricity passed through the diaphragm, by Dr. Fergusson	2	112
———, treatment of, by electro-puncture	5	25
———, Do. Do.	7	6
——— congenital, on the proper treatment of, by Dr. Marshall Hall	4	103
———, treatment of, by plunging in cold water, by Dr. Scholes	4	102
———, on the means to be adopted in, by J. Snow, Esq.	4	27
———, Dr. Dalziel's apparatus for performing artificial respiration in	2	117
———, treatment of, by acupuncture of the heart	4	34
Assafœtida in hooping cough	6	38
Asthma, treatment of, by nitrate of potash	7	34
——— nature of, and treatment by stramonium, opium, and æther, and copaiba	5	4
Astragalus, on the treatment of dislocations of, by T. Turner, Esq.	8	63
Auscultation and percussion, on the construction and application of instruments used in, by Dr. C. J. B. Williams	7	1
———, rectifications in the practice of, by Dr. Skoda	4	1
———, the echometer, a new instrument in the practice of	7	45
———, obstretrical, by Dr. Curriere	1	61
Autoplasty, an operation for the relief of contractions from burns, by Dr. T. Mutter	6	51
Bandaging, new system of, by M. Rigal	4	90
Barium, chloride of, in scrofula	1	30
———, Do. Do.	4	47
——— in strumous ophthalmia	1	50
Bark, yellow, cold water recommended in preparing the infusion of, by Mr. Battley	8	10
Baths, local, apparatus for, by M. Mayor	4	37
———, vapour and hot air, economical apparatus for, by Dr. Lynch	8	8
Bath, vapour, simple apparatus for	3	66
Baynton's method of treating ulcers, by J. Bell, Esq.	3	61
Bebeeru bark, a remedy in intermittent fevers, by Dr. Maclagan	8	5
Belladonna, formula for exhibiting	1	11
———, injections in iritis and conjunctivitis	5	77
———, injections in the treatment of strangulated hernia	6	70
———, in the treatment of ileus	4	32
———, in the treatment of dysmenorrhœa, by Dr. Burne	1	73
———, in the reduction of paraphymosis	4	79
———, as a preventive of the contagion of scarlatina	6	6
Benzoic acid in the treatment of gouty concretions	3	24
———, Do. Do.	4	12
———, in the treatment of urinary disorders, by J. S. Smith, Esq.	6	51
	7	43
Bile, inspissated, of the swine in fever and dyspepsia	8	25
——, of the ox, in the treatment of jaundice, by Dr. Johnson	2	5
———, in dyspeptic complaints, by Dr. Clay	6	16
Biscuits d' Olliver, a mode of administering mercury	2	90
Black drop, formula for the preparation of	8	48
Bladder, paralysis of, treated by injection of tr. cantharidis, by M. Lisfranc	8	41
———, prolapsus of, cured by operation, by R. T. Lightfoot, Esq.	5	57
Blenorrhagia in females, the neck of the uterus the true seat of	2	125
Blepharoplastie after removal of a nævus from the eyelid	8	109
Blindness, night, treated by oil of turpentine	8	91
———, from palsy of the iris, treated by caustic	8	90
Blistering plaster, mode of preparing	5	40



	VOL.	ART.
Blistering plaster, on the advantages of using a high temperature in the preparation of, by Mr. Donovan	2	96
Blood globules, on the motions of, by W. Addison, Esq.	3	87
——, observations on the state of the, in Bright's disease, by G. O. Rees, Esq.	7	104
——, successful case of transfusion of, by Dr. Prichard	8	54
Bloodletting, observations on, by Dr. Kennedy	2	95
—— in inflammation, remarks on	3	12
Bones, on the mode of reproduction of, by M. Flourens	4	117
——, upon the parts employed in the regeneration of, after necrosis, by Dr. J. A. Laurie	8	66
Boys, upon functional derangement of the heart in	3	28
Brain, on scrofulous tubercle of, by Dr. H. Green	3	82
——, diseases of, depending on the heart, or its valves; showing that a deficient supply of blood may be the cause, requiring stimulants instead of depletion	1	27
——, inflammation of, treatment of, by purgatives	3	30
——, on the use of bleeding in diseases of, by E. Copeman, Esq.	3	8
Bread, unfermented, in dyspeptic complaints	2	76
——, ——, mode of preparing and properties of, by H. Deane, Esq.	5	35
Bronchitis, on the treatment of, by Dr. C. J. B. Williams	7	27
——, treatment of, by acetate of lead, by Dr. Henderson	1	32
——, ——, by lobelia inflata	1	32
——, formula for a counter-irritant liniment in	8	56
Bubo and Chancre, upon the treatment of, by Langston Parker, Esq.	7	65
Burns, contractions from, relieved by the operation of autoplasty	6	51
——, mode of preventing the contractions after	3	63
——, treatment of, by soap, by Dr. Williamson	4	70
——, ——, by treacle and water, by F. A. Bulley, Esq.	5	75
——, ——, by mucilage, by W. Rhind, Esq.	6	60
—— and scalds, on the treatment of, by ungentum æruginis	3	70
Bursæ mucosæ and synovial sheaths, treatment of, when enlarged by subcutaneous division of the sac, by Dr. Williams	3	45
	6	67

Cæsarian section successfully performed	7	97
——, successful case of	8	117
——, case of, by J. Whitehead, Esq.	4	100
——, performed on a gravid uterus passed into the sac of an old inguinal hernia	5	94
Calculus, the bilateral operation for	6	73
Calculi, on the solution of by the waters of Vichy, by M. Petit	1	30
——, mode of dilating the urethra for the removal of, by Dr. Hancock	1	47
Callus, on the excision of, in badly united fractures, by Professor Portal	5	59
Camphor mixture, concentrated, mode of preparing	7	13
Cancer, on the use of bichloride of carbon in, by G. M. Tuson, Esq.	8	81
——, remarks upon, by M. Lisfranc	7	73
——, relieved by conium, by Dr. Osborne	1	11
——, incipient of the womb, on the pathology, diagnosis, and treatment of, by Dr. Montgomery	5	8
Cancerous affections, treatment of, by the hydriodate of arsenic and mercury	1	48
——, ——, by chlorate of zinc	1	48
Cancrum oris, on the use of chlorate of potash in, by Dr. Hunt	8	80
—— ——, Do. Do.	7	38
Cantharides, formula for the oil and plaster of	4	28
——, acetic extract of	8	55
——, in the treatment of paralysis	5	15
——, injection of the tincture of	8	41
——, in paralysis of the bladder, by M. Lisfranc	8	41

	VOL.	ART.
Cantharides, in incontinence of urine	7	44
———, in scurvy, by M. Irven	7	3
Cantharadine, a substitute for blistering plaster	8	55
Caoutchouc threads for sutures, by T. Nunneley, Esq.	3	42
——— Do.	4	63
Capillary circulation, on the forces concerned in	8	50
Capsicum, as a counter-irritant, by Dr. Turnbull	5	38
Carbon, terchloride of, in cancer, by E. W. Tuson, Esq.	8	81
Carbonic acid gas, on the local application of, as a counter-irritant, by Dr. James Johnson	2	87
Caries, scrofulous, treated by cod liver oil	1	15
Carotids, on the ligature of both the, by James Mills, Esq.	5	61
———, compression of, in convulsive affections	3	32
Cataract, secondary, capsular, new operation for, by M. Sichel	3	62
———, on the treatment of, in young persons, by R. Middlemore, Esq.	2	114
———, on the division of the cornea in the operation for, by D. W. Mackenzie, Esq.	8	77
———, a modification of the operation of depression for, by J. Morgan, Esq.	4	60
———, a new mode of operating for, by J. Morgan, Esq.	6	58
———, ———————, by M. Bennet	6	69
———, black variety of	8	97
———, on the sudden formation of	6	80
Catheters with a globular top, on the advantages of, by G. Rogers, Esq.	5	69
———, new form of, by Dr. Buchannan and J. C. Foulkes, Esq.	3	40
———, new mode of introducing, in difficult cases, by Dr. Patterson	3	56
Catoptrical exploration of the lens	4	64
Caustic, sulphate of copper used as a	7	80
——— ——, mode of preparing fine points of, by Dr. James Hunter	3	49
———, various formulæ for, with directions for their application, and remarks on the diseases requiring their use, by Sir B. Brodie	3	39
Cautery, actual, in procidentia uteri, by Dr. Lawrie	4	105
Cauterization of simple ulcers of the neck of the uterus	8	87
——— in the treatment of phlebitis, by M. Bonnett	8	110
Cephalagia, clinical remarks on, by Dr. Seymour	8	21
Cerebral lesions, state of the eye as a symptom in	8	30
Chancre and Bubo, on the treatment of, by L. Parker, Esq.	7	65
———, on the local treatment of, by cyanuret of mercury	7	76
Children, on diuresis in the diseases of, by Dr. Simeon	1	3
———, on the treatment of incontinence of urine in	1	29
———, new born, treatment of the asphyxia of, by immersion in cold water	4	102
———, on the proper treatment of asphyxia in, by Dr. Marshall Hall	4	103
Chlorine, on the use of, in scarlatina maligna, by Dr. Watson	6	9
Choking, on the nature and treatment of, by Dr. M. Hall	3	71
Chlorosis, on the treatment of, by T. W. B. Kirkby, Esq.	6	23-4
———, various modes of treatment of, by Dr. Cowan	8	3
———, on the pathology and treatment of, improvement of the digestive organs, iron, emmenagogues, local treatment, by Dr. Ashwell	3	15
———, treated by saffron	8	46
Cholera, on the treatment of, by Dr. Serle	8	17
Chorea, treatment of, by purgatives and tonics	4	19
———, by sulphureous baths, cold baths, oxide of zinc, by Dr. Green	4	36
———, treated by arsenic, in preference to the preparations of iron, copper, zinc, bismuth, silver, &c., by Dr. Reese	1	6
———, on the treatment of, by cimicifuga, by Dr. Kirkbride	2	102
———, treated by electricity	3	2
———, treated by strychnia	4	54
———, various remedies for, by Dr. Todd	8	22

	VOL.	ART.
Chorea, on the pathology and treatment of, by Dr. Babbington	5	9
Cicatrices of the neck after burns, on the treatment of, by a screw extension apparatus, by J. H. James, Esq...	8	70
Cimicifuga, in the treatment of chorea	2	102
Cinchona, in the treatment of acute rheumatism, by Dr. Davis	3	25
———, malambo bark a substitute for	3	57
Club-foot, on the operations and treatment for, by James Braid, Esq.	4	59
———, on the varieties and treatment of, by Dr. Guerin..	4	89
———, on the nature and treatment of	1	43
———, from paralysis, new operation for, by James Braid, Esq ..	3	47
Cod-liver-oil, on the preparation of	2	79
———, on the medical properties of	6	17
———, in the treatment of scrofula	1	15
Coffee, an antidote to poisoning by morphia	6	24
Colchicum, on the mode of administering, and the properties of, by Dr. Lewins	4	2
———, mode of administering in rheumatism, by A. L. Wigan, Esq.	1	4
———, case of poisoning, by Dr. A. T. Thompson	8	13
Cold, extensive appplication of, to the surface, to excite reflex movements in coma, by W. F. Barlow, Esq.	8	11
Colic, lead, prophylaxis of, by sulphureous acid beverage	7	15
Colica pictonum, treatment of, by warm water	4	24
———, ———, purgatives, belladonna and alum, by Dr. C. J. B. Williams	5	12
Colocynth oil, as a substitute for croton oil	2	104
Colon, stricture of, treated by operation, by T. P. Teale, Esq. ..	5	50
Compression in the treatment of mammary abscess	4	75
——— in the cure of aneurism, by Dr. O. B. Bellingham	8	68
——— in the treatment of chronic hydrocephalus	8	35
——— in the treatment of swelled testicle	2	111
——— Do.	3	58
——— and forcible apposition, in the treatment of an un-united fracture, by Sir B. Brodie, with illustrative cases by Dr. Norris..	3	59
Condensed air, pressure by, as a surgical remedy	8	79
Conium, effects of, compared with those of opium..	1	22
Conjunctiva, treatment of the diseases of, by creasote	7	70
Conjunctivitis, strumous, treatment of, by tr. of iodine applied locally	7	69
Constipation for forty-five days, from scirrhus of the colon	7	105
———, treated by sulphate of zinc	6	8
Consumption, treatment of, by sea salt	1	1
———, treatment of, by inhalation of conium and iodine, by Sir C. Scudamore	1	7
———, prevention of, by feeding on ferruginous bread, by M. Coster	1	8
———, prevention and cure of, by the influence of malarious atmosphere, by Dr. Green	1	9
———, treatment of, by koumiss, prepared from milk	1	13
———, incipient, treatment of, by emetics, counter-irritation and iodine, by Dr. Hughes	2	70
———, mercurial treatment of, by Dr. Munk	2	71
———, on the pathology and treatment of, by Dr. Scudamore ..	6	10
———, by Dr. Graves.. ..	8	6
———, induced by the inhalation of solid particles, by Dr. Holland	8	4
——— and tubercles, on various opinions concerning, by Dr. Black	8	9
———, treated by naphtha, by D. Wilson, Esq.	8	12
——— iodide of iron..	8	19
——— by emetics	8	58
Contractions after burns, mode of preventing	3	63
——— of the womb, a new mode of inducing..	5	92
———, muscular, treated by electricity, by M. Breschet	4	83
Convulsions, treatment of, by oxide of zinc, by Dr. Green	4	10
———, infantile, treated by ice to the spine, by Dr. Todd ..	5	27

	VOL.	ART.
Convulsive diseases, Indian hemp in the treatment of	6	5
———, treated by compression of the carotids	3	32
Copaiba, mode of making into pills	4	57
——— and cubebs, formula for in Gonorrhœa	1	49
Copper, sulphate of, in the treatment of croup	8	28
———, ———, used as a caustic	7	80
———, poisoning by, carbonate of soda an antidote for	5	39
Cornea, on the nerves in, by Dr. Pappenheim	1	68
———, on the treatment of ulcers and opacity of, by John Walker, Esq.	2	110
———, on congenital opacity of, by S. Crompton, Esq...	1	41
———, Do.	3	60
———, iodine in the treatment of opacity of	4	73
——— and conjunctiva, treatment of the diseases of, by creasote	7	70
———, on the division of, in the operation for cataract, by J. Scott, Esq.	8	77
———, a new moveable needle knife, for section of the	8	78
———, blindness from opacity of, relieved by division of some of the orbital muscles	5	79
———, transplantation of, or keratoplasty	6	68
Counter-irritation, M M. Trousseau and Velpeau's method of producing by cantharides	1	19
——— by S. Granville	1	19
——— by M. Gondret	1	19
——— in the treatment of consumption	2	70
——— produced by heat	6	30
——— rapidly produced by burning æther, by C. J. Edwards, Esq.	5	34
———, powerful, by means of the long issue upon the calvarium, by Dr. Wallis	8	72
Counter-irritant liniment in the treatment of bronchitis	8	56
Counter-irritants, new, by Dr. Turnbull	5	38
Cranial saw, new form of	6	76
Creasote as an internal and external remedy	6	18
——— in vomiting, hæmorrhage, &c.	5	11
——— to arrest hæmorrhage after lithotomy	4	96
——— in the treatment of diseases of the cornea and conjunctiva	7	70
Croton oil in the treatment of nervous disorders	4	18
———, mode of prescribing	5	11
——— in the treatment of neuralgic complaints, by Dr. Easton	5	33
———, mode of applying externally	6	31
———, colocynth oil a substitute for	2	104
——— in the treatment of nervous disorders, by Dr. Newbigging	3	11
Croup treated by a saturated solution of nitrate of silver, by Dr. Gibbes	6	29
———, treatment of by sulphate of copper	8	28
Crowing respiration, remarks on, by Dr. Marshall Hall	6	44
Corpora-lutea, true and false, distinctions between, by Dr. R. Paterson	3	85
Cubebs, extract of, a new preparation	1	54
———, on the adulteration of	1	54
Cupping, an improvement in the mode of performing	8	84
Cynanche, treatment of, by guaiacum	3	9
Cysts on the eyelids, M. Velpeau's mode of treating	6	62
Dartres of the perineum treated by iodine	8	34
Deafness, on the treatment of, by M. Petrequin	3	72
——— from paralysis, electro-puncture in the treatment of, by M. Jobert	8	86
———, researches in the local causes of, by — Toynbee, Esq.	8	108
Delirium tremens, on the treatment of, by other means rather than by opium	3	37
Dentition, see children, diseases of.		
Diabetes mellitus, on, by Dr. Maitland	1	33
———, by Dr. Barlow	2	86
——— treated by tr. ferri mur., by C. Clay, Esq.	2	86

	VOL.	ART.
Diabetes mellitus, on the treatment of, by M. Bouchardat	5	20
——————, by Dr. Budd	5	27
——————, successful treatment of, by ioduret of iron	7	18
——————, treatment of, by carbonate of ammonia	8	38
Diagnosis derived from observation of the urine, by Dr. Simon	8	14
——— of utero-placental hæmorrhage	2	131
Diarrhœa in infants, treatment of, by injections of nitrate of silver, by M. Trousseau	3	26
———, treatment of, by burnt rhubarb	3	31
——— and dysentery treated by diospyros, &c., by Dr. Mettauer	7	33
Dilating canula of Dr. Dunne, to be used after the operation of trachelotomy	6	55
Diospyros Virginiana, in the cure of diarrhœa and dysentery	7	33
Dislocation into the ischiatic notch, diagnostic signs of	8	98
———, old, cure of, by division of the muscles in its neighbourhood, by Professor Dieffenbach	1	51
——— of orbicular joints, M. Colombat's mode of reducing	5	68
——— of the astragalus, on the treatment of by various means, by T. Turner. Esq.	8	63
Dropsy of the Amnion, curious case of, by J. Toogood, Esq.	4	101
———, on the spontaneous cure of	4	116
———, passive, treatment of, by diuretics and purgatives	7	33
———, on the nature and treatment of, by Dr. O'Beirne	6	14
———, chronic, treatment of by decoction of elder bark	8	44
———, proper regimen and treatment for	8	49
———, renal, on elaterium in the treatment of, by Dr. Clendenning	5	17
Dysentery, acute tropical, treatment of, by large doses of calomel, &c., by Dr. Robert Lewins	4	53
Dyspepsia, treated by inspissated bile of the swine	8	25
——————, treated by ox gall	6	16
Dysmenorrhœa, treated by belladonna	1	73
Ear, Gruber's speculum for the	4	72
Elaterium in the treatment of renal dropsy	5	17
Elbow joint, excision of, by M. Roux	4	91
——————, Do.	6	63
Elder bark, in chronic dropsies	8	44
Electricity in the treatment of chorea, paralysis, amenorrhœa, &c., by Dr. Golding Bird	3	2
——— in the treatment of muscular contractions	4	33
——————, best mode of employing, in the cure of neuralgia, by M. C. James, Esq.	4	43
——— Galvanic, in paralysis of the seventh pair of nerves	4	45
——— to the diaphragm in asphyxia from drowning	2	112
——— in cases of suspended animation	7	6
——— in poisoning by opium	7	7
———————————	7	8
——— in the cure of aphonia	8	45
Electro-puncture in the treatment of deafness from paralysis, by M. Jobert	8	86
——— in the treatment of neuralgia, paralysis, and asphyxia, by Dr. Dunglison	5	25
Elm bark, on, by Dr. Sigmond	1	23
Emetics in the treatment of consumption	2	70
——— Do.	8	58
Emmenagogue medicines, by T. W. Kirkby, Esq.	6	24
Enlarged bursæ mucosæ, treatment of, by subcutaneous division of the sac, by Professor Williams	3	45
Enteritis, puerperal, treatment of, by diacetate of lead	8	112
Entropion cured by subcutaneous myotomy	4	84
———————————	6	82
———, on the mode of operating for, by Dr. Bellingham	6	59

	VOL.	ART.
Epilepsy, on the treatment of, by sulphate of zinc in large doses, and other tonics, by Dr. Babington	3	1
——— cured by hydrocyanate of iron	4	44
Epistaxis, simple means of arresting	6	42
———	7	42
Eradication of inverted eye lashes, by Dr. James Hunter	3	49
Erectile tumour in the popliteal space, removal and description of, by R. Liston, Esq.	8	82
Ergot of rye, on the oil contained in, as an external and internal remedy	2	76
———, on the use of, in polypus uteri, menorrhagia, leucorrhœa, chlorosis, and dysmenorrhœa, by Dr. Fyfe	4	3
———, in paraplegia	6	40
———, in retention of urine, by Dr. W. Kingsley	8	103
———, used to induce premature labour in a dwarf, by M. Paul Dubois	2	133
———, polypus of the uterus expelled by, by M. P. Moyle, Esq.	4	99
———, as a means of inducing premature labour	1	63
———, on the use of, in labours, by J. Paterson, Esq.	1	59
———, producing an epidemic abortion in cows	5	96
———, remarks upon	4	55
——— ———	5	11
———, mode of preparing the ætherial tincture of	1	59
Erysipelas treated locally by sulphate of iron, by M. Velpeau	5	62
———	6	25
———, Mr. Higginbottom's method of treating, by nitrate of silver	8	100
Essential oils, mode of discovering the adulteration of	2	103
Excision of diseased joints, by Bransby Cooper, Esq.	2	115
——— of the tonsils, new instrument for	2	121
——— of joints, by R. Alcock, Esq.	3	44
———, by Bransby Cooper, Esq.	4	71
——— of the elbow joint	6	63
———, by M. Rouse	4	91
Exostosis of the spine, a cause of paralysis and neuralgia, by Dr. Battersby	8	15
Expectant treatment of comminuted fractures, advantages of	1	38
Extirpation of an ovarian cyst, by B. Phillips, Esq.	2	122
——— of a diseased uterus	2	123
——— of diseased ovaries, by Dr. C. Clay	7	51
Extraction of iron particles from the eye, by means of the magnet	6	77
Eye-lashes, inverted, eradication of, by Dr. James Hunter	3	49
Eye, on the anatomy of the aponeurosis of the muscles of, by M. Bennet	3	88
——, action of hydrocyanic acid on, by Dr. Turnbull	4	97
——, Professor Rosas' mode of operating on	8	83
Femur, oblique fractures of, apparatus for	4	95
Fever, puerperal and other kinds produced by contagion from sloughing sores, &c., by Dr. Paley	1	26
———, puerperal, arising from the contagion of typhus, by W. E. Humble, Esq.	6	85
———, yellow, treatment of, by quinine in large doses	2	74
———, intermittent, treated by large doses of quinine, by Dr. Flint	5	26
———, ———, phloridrine, a new remedy for	5	45
———, ———, bebeeru bark a remedy for	8	5
———, typhus, on the treatment of, by hydriodate of potash, by Dr. Morrison	2	88
———, typhus, of children, treatment of, by quinine	4	46
———, nervous, use of tartrate of antimony with opium, in the advanced stages of, by Dr. Graves	7	2
———, on the treatment of, by mercury, salines, &c., by Dr. Cowan	8	3

	VOL.	ART.
Finger completely divided, re-union of, by A. Graham, Esq.	3	50
——————Do. Do.	6	75
Fissures of the anus, treated by rhatany root	3	68
Fistula ani, treatment of, by iodine injections, by Dr. Clay	8	93
Fistulæ of the urethra, mode of treatment of, by M. Ricord	4	78
——— in perinœo, treatment of, by Sir B. Brodie	6	45
———, recto vaginal, successfully treated by operation, by M. Petrequin	4	92
———, vesico-vaginal, cured by actual cautery, by S. A. Payan, Esq.	5	52
——————, upon the treatment of, by M. Lallemand ..	8	69
——————, on the palliative treatment of, by the Indian rubber bottle, by Dr. James Reid	7	64
Fœtal blood-vessels, the anatomical relations of, with those of the mother, by Dr. John Reid	3	81
Forceps case, remarkable	7	99
Fracture, comminuted, expectant treatment of	1	38
———, un-united, treatment of, by forcible apposition, with an immoveable apparatus, by Sir Benjamin Brodie	3	59
———, un-united, treated by iodine applications	8	104
——— of the leg, suspensory apparatus in the treatment of, by J. Luke, Esq...	3	69
———, oil varnish applied to the immoveable apparatus for	4	75
———, danger of anchylosis from the continued use of the immoveable apparatus for, by M. Teissier	4	86
———, oblique, of the femur, apparatus for	4	95
——— badly united, on excision of the callus, in	5	59
Gallic acid in the treatment of hæmorrhage..	8	23
Galvanism in the cure of Aphonia	8	45
Gangrenous inflammations, treatment of, by nitrous acid, by Dr. W. Davidson	5	53
Gastric affections treated by nitrate of silver..	5	22
Gelatine, on the nutritive powers of	4	118
Gleet, treatment of, by tr. ferri sesqui-chlor.	6	65
Globules of the blood, on the motions of, by W. Addison, Esq. ..	3	87
Gluten-bread, in the treatment of diabetes, by M. Bouchardat ..	5	20
——————, by Dr. Budd	5	29
Gold-leaf and iron filings, an antidote for poisoning, by corrosive sublimate	5	7
Gonorrhœa, treatment of, by weak injections with sulphate of zinc ..	1	46
——————, by injections of nitrate of silver	1	49
—————— chloride of zinc	3	64
———, treatment of, by cubebs and alum	3	73
———, on the use of injections in, by W. Acton, Esq.	4	65
———, on various modes of treatment of, by M. Velpeau	4	68
———, treatment of, by injections of solution of lunar caustic, by Bennett Lucas, Esq.	7	59
Gouty concretions, on the treatment of, by benzoic acid, by Dr. Ure ..	3	24
Granulations, on the vessels in, by R. Liston, Esq.	3	86
Gravel, treatment of the various forms of, by Dr. Watson	6	3
———, gout, calculus, on the treatment of, by H. B. Jones, Esq. ..	7	22
Gravidine in the urine of pregnant females	6	84
Guaiacum in the treatment of cynanche and of rheumatism, by J. Bell, Esq.	3	9
Gum-resins, carbonate of potash useful in the compounding of ..	6	22
Hæmaturia, treatment of, by tr. ferri sesqui-chlorid, by C. Clay, Esq..	3	4
———, on the nature and treatment of, by Dr. Watson	6	13
Hæmoptysis, pathology of, by Dr. Graves	8	16
———, treated by emetics, of ipecacuanha, by Dr. Osborne ..	1	11
——————————, by W. A. Trenor, Esq	1	12
Hæmorrhages, treatment of, by tartrate of antimony, by Dr. Stoll ..	4	17

	VOL.	ART.
Hæmorrhage, treated by ipecacuanha, by Dr. Osborne	1	11
——————————, by W. A. Trenor, Esq.	1	12
——————, on the varieties and treatment of, by Dr. Watson	3	18
——————, utero-placental, diagnosis of, by M. Gendrin	2	131
——————, after extraction of teeth arrested by nitrate of silver, by C. Ray, Esq.	3	55
——————, treatment of, by alum, by Dr. Lynch	4	9
——————————, by Creasote	5	11
Ditto Ditto	6	18
——————, internal, treated by Di-acetate of lead	5	30
——————————————in large doses, by Dr. Lane	6	39
——————————, treatment of, by oil of turpentine, by Dr. Willshire	7	39
——————, matico a new remedy for	6	79
——————————	8	7
——————, gallic acid and rhatany as remedies in	8	20
——————— from the lungs, pathology of, by Dr. Graves	8	16
——————— from Varix of the left labium	7	100
——————— after lithotomy, arrested by creasote, by Dr. Daser	4	96
——————— after delivery, on the use of the tourniquet in, by Wm. Pretty, Esq.	4	104
——————————— arrested by cold water applied to the interior of the womb, by Dr. Hecking	5	93
——————————, complicated with disease of the spleen and kidneys	6	91
——————— uterine, tabular view of the treatment of	7	92
——————————— arrested by pressure on the aorta, by J. D. Brown, Esq.	7	93
——————————, treatment of, by tannin	7	94
——————————, interesting case of	8	114
Hæmorrhagic diathesis, on the treatment of, by James Miller, Esq.	6	46
Hæmorrhoidal affections, treatment of, by nitric acid as an escharotic, by J. Houston, Esq.	7	62
——————— tumours, mode of reducing	4	77
Hæmorrhoids, on the varieties and treatment of, by R. A. Stafford, Esq.	7	61
——————, on the removal of, by wire ligatures, by Pr. Horner	7	63
Hæmastosis, or the arrest of blood in its course, as a remedial agent, by Dr. Buckler	7	24
Ham-strings, section of, for the cure of contracted knee joints, by B. Phillips, Esq.	1	36
Hare-lip, on the causes of, by M. Borrisson	4	120
——————, a modification of the treatment for, by Dr. Houston	6	83
Harrogate water, artificial, mode of preparing	5	41
Head, affections of, children remarkably relieved by copious diuresis	1	3
——— ache, nervous, treatment of, by aconite	1	28
Heart, diseases of, accompanied by deficient or interrupted power, causing different diseases of the brain, by Drs. Law and Corrigan	2	27
——————, on the functional derangement of, in growing persons, symptoms, physical signs, treatment, by Dr. Corrigan	3	28
——————, on the nature and character of the sounds of, and of valvular disease of, by Dr. Watson	5	1
——————, on the sounds of, in a case of congenital protrusion of this organ, by M. Cruveillier	4	119
Heat as a counterirritant	6	36
——, animal, new theory of, by H. Ancell, Esq.	1	64
Hemicrania and tic doloureux, treatment of, by strong ammonia to the palate	8	95
Hemp, Indian, in some convulsive diseases, by W. Ley, Esq.	6	5
——————, remarks on	8	24
Hemlock, use of, and mode of preserving in treacle	1	11
Hernia, strangulated, reduction of, by the use of the rectal tube	1	40
——————————————, treatment of, by tobacco	1	57
——————————————, on the use of morphia in, by Dr. Bell	4	66

	VOL.	ART.
Hernia, strangulated, inguinal, new methods of reduction of	2	123
——, on the application of regulated pressure in, by means of caoutchouc	4	63
——, reduction of, after acupuncturation	4	94
——, reduction of after the administration of opium	5	87
——, treated by copious injections	5	63
——, treated by lead injections	5	87
——, treated by exhaustion through the elastic tube, by S. Walker, Esq.	6	50
——, treated by injection of belladonna	6	70
——, new knife for dividing the strictnre of, by Dr. T. C. Stewart	8	101
——, classification of the treatment for, and on the reduction of, by distention with liquid injections, by Dr. James Arnott	8	74
——, reducible, operation for the radical cure of, by Bransby Cooper, Esq.	2	108
——, various means for the radical cure of	3	75
——, femoral, reduction of, by means of exhaustion	8	85
——, pseudo strangulations of, importance of, and means of distinguishing, by M. Malgaigne	4	87
——, Do. Do. Do.	5	55
——, subcutaneous operation for	4	115
——, complicated with colic, opium in the treatment of	7	92
Hernial sac, treatment of injured intestine from a blow upon, by C. A. Key, Esq.	5	49
Hip-joint disease, on the treatment of, by mercury	6	71
Hippuric acid, remarks upon, by Dr. Ure	3	24
Do. Do. Do.	4	12
Hooping-cough relieved by diuresis produced by digitalis or cantharides	1	3
——, on the treatment of, by ioduret of silver, by Dr. Patterson	7	28
——, treatment of, by assafœtida	6	38
——, various remedies for, by Dr. Cowan	8	3
Hydarthrosis, iodine injections in, by M. Bennet	7	75
——, treated by nitrate of silver	7	87
Hydriodate of potash in typhus fever	2	88
—— and sarsaparilla in chronic rheumatism	3	23
—— and guaiacum in chronic rheumatism, by Dr. Taylor	5	14
—— in the treatment of periostitis	1	56
—— in the last stage of acute hydrocephalus	4	35
—— in acute hydrocephalus, by C. Fluder, Esq.	6	7
—— in scrofulous and syphilitic diseases	6	15
——, effect of, on the system, by M. Ricord	7	11
——, on the preparations of the ointment of	4	56
——, new preparation for the external application of	5	42
Hydrocephalus, acute, the last stage of, treated by large doses of hydriodate of potash	4	35
Do. Do. Do.	6	7
Do. Do. on cold effusions in	4	50
——, chronic, treated by ipecacuanha liniment	8	23
——, treatment of, by compression	8	35
——, best mode of detecting incipient strabismus in	8	53
——, mode of administering mercury in	3	34
——, treatment of, by iodine, by Dr. Christie	7	16
——, ——, by tapping, by R. G. H. Butcher, Esq.	7	17
Hydrocephaloid disease, on the nature, symptoms, and treatment of, by Dr. Marshall Hall	4	31
Hydrocele, remarks on the treatment of, by Bransby Cooper, Esq.	3	51
——, on the radical cure of, by injection, by M. Velpeau	4	68
——, treated by injection of diluted tincture of iodine	5	72
——, improvement in the treatment of	7	55

	VOL.	ART
Hydrocyanic acid, action of, on the eye, by Dr. Turnbull	4	97
Hydrophobia, treatment of, by Indian hemp	2	72
Hydrophthalmia causing amaurosis, treated by oil of turpentine, by Dr. Hocken	5	64
Hydrosudopathic treatment of disease, by M. Gibert	4	48
Hyoscyamus, on the best mode of collecting and preserving, by J. Houlton, Esq.	5	43
Hysteria and spasmodic affections, on the treatment of, by essential oil of valerian	2	84
———, treated by the application of tobacco leaves	6	28
———, treatment of, by ergot of rye	7	47
———, local, various forms of, br Dr. Todd	8	18
Ice applied to the spine in infantile convulsions	5	27
Ileus, a case of, cured by injection of air	3	27
——, treated by belladonna	4	32
Incontinence of urine, treatment of, by tincture of cantharides, by Dr. Guy	5	6
——————— by strychnia	7	44
Indigestion, (see stomach, diseases of)		
Inflammation, hints on the treatment of, bleeding, mercury, antimony, by Dr. Watson	3	7
———, on treatment of, by blood-letting	3	12
———, acute internal, on the use of opium in, uncombined, in combination with ipecacuanha; after bleeding; by Dr. Christison	3	17
Incision in the treatment of periostitis	1	56
Indian hemp in the treatment of hydrophobia, tetanus, and other diseases, by Dr. Shaughnessy	2	72
——————— in some convulsive diseases	6	5
———, remarks on	8	24
Infants, nursery treatment of	7	46
Infusions, on the best mode of preparing	5	37
Injections, copious, in the treatment of strangulated hernia, by R. S. Lawrence, Esq.	5	63
Injections of fluid for the distention of the intestine, a mode of reduction in strangulated hernia, by Dr. James Arnott	8	74
Inoculation as a test of syphilis, by H. Mayo, Esq.	5	86
——————— of the matter of blenorrhœa as a cure for pannus, by Dr. A. B. Stout	8	75
Insanity, on seclusion in the treatment of, by Dr. Conolly	3	35
———, on the non-restraint system in the management of	7	41
Intermittent uterine hæmorrhage	8	114
Intestine, injured, treatment of, from a blow over a hernial sac, by Aston Key, Esq.	5	49
Intestinal obstruction from stricture of the sigmoid flexure of the colon, on the treatment of, by operation, by T. P. Teale, Esq.	5	50
Iodine, formula for inhalation of	1	7
——— in the treatment of consumption	2	70
———, on the presence of, in cod liver oil, by M. Gmelin	2	79
———, on the administration of	4	40
———, tincture of, to the lids in strumous ophthalmia	7	69
——— in the treatment of scrofula	1	39
——— injections in hydrarthrosis	7	75
——— in the treatment of ununited fracture	8	104
———, inhalation of, in consumption	6	10
——— in the treatment of dartres of the perineum	8	34
——————— of opacity of the cornea	4	73
——— for the reduction of enlarged prostate	2	119
——— injections in hydrocele	5	72
——— and its compounds, on topical applications of	6	48
——— in the treatment of strumous ophthalmia	1	45

	VOL.	ART.
Iodine injections, in serous cysts	5	81
—— injections, in the treatment of fistula ani, by C. Clay, Esq.	8	93
Ipecacuanha liniment in chronic hydrocephalus	8	23
Iris, state of the, as a symptom in cerebral lesions	8	30
——, on the changes in the colour of, produced by inflammation, and their modifications depending on its natural tint, by Dr. James Hunter	3	57
——, on injuries of, and the formation of artificial pupil, by J. B. Estlin	8	76
——, palsy of, treated by the application of lunar caustic to the cornea, by Alexander Ure, Esq.	8	90
Irish moss in consumption, scrofula, &c.	5	11
Iritis, treatment of, by spirits of turpentine	1	35
——, diagnosis and treatment of, guided by the changes of colour in the iris, produced by inflammation	3	57
——, and conjunctival inflammation, treated by belladonna injections, by F. A. Bulley, Esq.	5	7
Iron, formula for ferruginous bread	1	19
—— for preparing the precipitated carbonate	1	10
—— the "citrated aromatic wine of iron,"	1	10
——, hydrated peroxide in poisoning by arsenic	1	17
——, best mode of giving the true protoxide, by Mr. Donovan	1	18
——, experiments on, by Dr. Maclagan	2	78
——, lactate of, on the use of	2	99
——, tincture of, in the treatment of hæmaturia	3	4
——, proto-iodide of, preparation of, and mode of preserving, mode of preparing the sesqui-iodide	3	16
——, wine of, mode of preparing, by M. Donovan, Esq.	4	29
——, iodide of, mode of preparing and preserving, by M. Donovan, Esq.	4	39
——, hydrocyanate of, a cure for epilepsy	4	44
—— filings and gold leaf, a remedy for poisoning by corrosive sublimate, by Dr. Buckle	5	7
—— administered in the form of clinkers, by C. J. Edwards, Esq.	5	19
——, methods of forming different preparations of, by W. Tyson, Esq.	5	28
—— pills, Dr. Bland's	5	37
——. preparation of the citrate of	7	35
——, preparations of	7	49
——, chalybeate water, formulary for	7	40
——, sulphate of, in erysipelas, by M. Velpeau	6	25
——, various preparations of, by Dr. Todd	6	26
——, distinction between the citrate and ammonio-citrate of	6	30
——, iodide of, mode of preserving the solution	6	37
——, iodide of, as a remedy in consumption	8	19
—— administered in the form of food	8	31
——, compound pill of, formula for the preparation of	8	36
——, compound mixture, formula for	8	37
——, iodide of, in the treatment of scrofula	1	39
——, sulphate of, in erysipelas, by M. Velpeau	5	62
——, sesquichloride of, in gleet	6	65
——, hydro-sesquioxide of, an antidote to arsenic	6	66
Ischiatic notch, dislocation into, diagnostic sign of	8	98
Isinglass plaster, advantages of, and mode of preparation	4	70
Issue, formed by a long incision, powerful means of counter-irritation to the calvarium, by Dr. Wallis	8	72
Itch, treatment of, by local applications of sulphur	4	41
Jaundice, treatment of, by inspissated ox-gall	3	5
Jaws, permanent closure of, treated by division of the masseter muscle, by W. Fergusson, Esq.	5	76
Joints, on the excision of, by Bransby Cooper, Esq.	2	115
——, by Do.	4	71
——, by R. Alcock, Esq.	3	44

	VOL.	ART.
Joints, loose bodies in, removal of, by subcutaneous incisions, by Dr. Goyrand	3	54
——, scrofulous diseases of, treated by cod liver oil	1	15
Kephalepsalis, the, a new instrument for extracting the fœtus in cases of contracted pelvis, by Dr. Campbell	5	91
Keratoplasty, or transplantation of the cornea	6	68
Kidneys, observations on the state of the blood in Bright's disease of, by G. O. Rees, Esq.	7	104
Kidney, treatment of disease of the, by Dr. Bright	1	20
——, Do. by Dr. Barlow	1	20
Keistein, mode of detecting, in the urine of pregnant females, by H. Letherby, Esq.	5	95
Knee-joint, contracted, section of the hamstrings for the cure of, by B. Phillips, Esq.	1	36
Kourmiss, preparation and use of	1	13
Labour, separation of the neck of the uterus during, by Hugh Carmichael, Esq.	2	129
——, premature, induced in a dwarf, by M. Dubois	2	133
——, Do. by puncture of the membranes	3	78
——, Do. by the use of the plug	5	99
Lactic acid, a solvent for uric acid	8	61
Laryngotomy, on the mode of performing, and advantages of, by John Hilton, Esq.	6	54
Laryngismus stridulus, remarks on, by Dr. Marshall Hall	6	44
Larynx and trachea, experiments upon the sensibility of, by Mr. Erichsen,	8	73
Lead, acetate of, in large doses, for hæmorrhage	6	39
——, in bronchitis, by Dr. Henderson	1	32
——, peculiar affections on the gums	2	89
——, diacetate of, in internal hæmorrhage	5	30
——, in puerperal diarrhœa	8	112
——, iodide of, in strumous sores	6	48
Leeches, made to bite by immersion in beer	8	92
Lens, catoptrical exploration of, by Dr. Watson	4	64
Lepra and porrigo, on the treatment of, by ioduret of sulphur	5	53
——, and other scaly diseases, use of the elm bark in, by Dr. Sigmund	1	23
Leucoma, treatment of, by incisions into the cornea	6	78
Leucorrhœa, treatment of, by creasote	7	36
——, by iodine	7	37
Leucorrhœa, uterine, treated by nitrate of silver, by Dr. Hudson	1	31
Light, artificial, the influence of, in the improvement of vision	3	83
Ligature of arteries, by the subcutaneous operation	5	84
Ligatures upon arteries, upon the changes which occur after application of, by James Spence, Esq.	8	71
—— of wire, in the removal of hæmorrhoids	7	63
Lime, oxalate of, in the urine, tests for, and treatment of	6	2
Lip, lower, method of restoring, after removal by operations, by Dr. Buchanan	4	61
Liquid form of medicines the most efficacious	8	62
Lithotomy and lithotrity, on the comparative merits of, by Edwin Lee, Esq.	5	47
——, on, by Sir B. Brodie	6	45
——, on the mode of performing the operation of, by James Syme, Esq. &c.	7	53
——, in America	7	54
Lithectasy, case illustrative of the value of, by T. Elliott, Esq.	7	52
——, remarks upon, by W. Fergusson, Esq., and others	8	64
Liver, on the uses of, by Dr. Bostock	5	102
——, engorgement of, receipt for	8	51
——, chronic derangements of, treated by nitro-muriatic-acid	1	34
Lobelia inflata, effects and mode of preparing the tincture	2	94

	VOL.	ART.
Lupus and psoriasis, on the treatment of, by the hydriodate of arsenic and mercury, by Mr. Donovan	2	82
Lungs, diseases of, (see consumption)		
Lymphatic vessels, rapid circulation in, by T. W. King, Esq.	1	67
Magnet, the extraction of iron particles from the eye by means of	6	77
Malambo bark, a substitute for cinchona	8	57
Malaria, on the connection of, with the spontaneous evolution of sulphuretted hydrogen, by Professor Daniel	4	112
———, on sulphuretted hydrogen as the active principle of, by Dr. Gardener	8	1
———, Do. by Mr. Daniel	4	112
———, Do. the opposite opinion of Dr. Prichett	8	1
Mammary abscess treated by compression	4	74
Manganese, as a medicinal agent	7	48
Mania treated by antimony, by Dr. Sutherland	8	33
Maternal blood-vessels, the anatomical relations of, with those of the mother, by Dr. John Reid	3	81
Matico, as a styptic, by Dr. Munro	6	79
———, in catarrhal and hæmorrhagic disorders, &c., by Dr. Jeffries, and by Dr. Lane	8	7
Measles, inoculation of, report on the results of	7	31
Medicines, new mode of classifying	8	42
Menses, pregnancy two years after the cessation of	8	115
Menstruation, theory of, by G. F. Girdwood, Esq.	7	102
———, new theory of, by M. Gendrin	1	62
———, on the function of the ovaries in, by Dr. R. Lee	2	128
———, during gestation, case of	4	107
———, in the Negress not earlier than in the European	6	88
Mercury and arsenic, hydriodate of, in the treatment of cancerous affections, by R. Carmichael, Esq.	1	48
———, in the treatment of syphilis	1	58
———, iodide of, Do.	6	48
———, bichloride of, administered internally, in strumous ophthalmia, by John Hamilton, Esq.	2	109
——— Do. in the treatment of old ulcers	5	82
———, in the treatment of hip-joint disease	6	71
———, effect of, in very small and repeated doses	1	16
———, on the administration of, in biscuits, in cases when it is difficult otherwise to avoid its unpleasant effect on the bowels	2	90
———, mode of administering, in chronic hydrocephalus	3	34
——— and antimony, methods of forming various preparations of, by W. Tyson, Esq.	5	5
———, bichloride of, gold leaf and iron filings a remedy for, by Dr. Buckler	5	7
———, Do. hydrated protosulphate of iron an antidote for	6	33
——— and arsenic, iodide of, in skin diseases, &c.	1	82
——— Do. Do.	4	51
——— Do. Do.	6	15
———, cyanuret of, in the treatment of chancres	7	76
——— administered in cigars	8	59
Mercurial treatment of consumption	2	71
——— and other applications for the prevention of the cicatrices of variola	3	19
Metacarpal bone, removal of, the corresponding finger being preserved, by M. Blandin	3	53
Menorrhagia (see hæmorrhage)		
Milk, method of producing extemporaneously	6	35
—— in the urine of pregnant females, by Dr. Golding Bird	1	66
Miscarriage, on the treatment of, by J. S. Streeter	2	130
Moxa made from quick lime, by Dr. Osborne	5	60
Monesia, on the bark of, in various diseases	2	98

	VOL.	ART.
Morphia, formula for solution of in neuralgia, &c.	1	5
——— , poisoning by, coffee an antidote for, by Dr. Fosgate	5	24
Moss, Ceylon, usé of, by Dr. O'Shaughnessy	1	24
Mucous membrane of the stomach, on the structure of, by Dr. Todd	2	140
Muscles, on the subcutaneous division of, by M. Guerin	2	124
Muscles of the eye, on the anatomy of the aponeurosis of	3	88
Mustard-seed oil, on the external and internal application of	5	25
Nævus, vascular, removal of, by the actual cautery	6	81
———, vascular, treatment of, by the insertion of threads impregnated with caustic	8	99
———, vascular, treated by vaccination	7	79
———, treatment of, by acetum plumbi, by Dr. Sigmund	7	88
Naphthaline in the treatment of psoriasis, by M. Emery	7	85
Naphtha in the treatment of consumption, by D. Wilson, Esq.	8	12
Narcotism applied to the cure of neuralgic diseases	5	23
Necrosis treated by chloride of zinc	2	126
———, upon the source from which bones are regenerated after, by Dr. J. A. Lawrie	8	66
Needle, aneurism, improved by Mr. Trant	7	57
Nervous disorders, treatment of, by croton oil	4	18
——— excitement, treatment of, by opium injections	4	23
——— fever, on the use of tartrate of antimony, with opium, in the advanced stages of, by Dr. Graves	7	2
——— affections, treated by amber, by M. Gerard	5	46
Neuralgia, in its different forms, treated with morphia, by Dr. Cristin	1	5
——— belladonna	1	11
——— aconite	1	28
——— by strychnine, by Dr. Pidduck	2	81
———, treated by croton oil	3	11
———, by Dr. Easton	5	33
——— of the urethra	8	118
———, treated by acupuncturation	3	36
——— by tincture of aconite	4	14
——— by electricity	4	43
——— by electro-puncture	5	25
——— and sciatica, treated by oil of turpentine	5	10
———, treated by Indian hemp	7	25
——— veratria	8	47
——— by narcotism	5	23
Nitrous acid in the treatment of gangrenous inflammation	5	53
Nipple, sore, treatment of, by astringent applications	6	64
Nitro-muriatic acid, use of, in chronic derangement of the liver, by Dr. Mettauer	1	34
Nitrate of silver, use of, in mucous affections, by Dr. Hudson	1	87
———, injections in the treatment of the diarrhœa of infants, by M. Trousseau	3	26
———, removal of the discolourations caused by, by hydriodate of potash	7	29
———, by Dr. Patterson	6	1
———, in gonorrhœa and chilblains	5	11
———, in gastric affections, by Dr. Dick	5	22
——— of potash, large doses of, in acute rheumatism	4	16
Nitric acid, as an escharotic, in the treatment of hæmorrhoidal affections, by John Houston, Esq.	7	62
Night blindness treated by oil of turpentine, by C. Kidd, Esq.	8	91
Nose, crooked, operation for, by subcutaneous division of the cartilages	4	80
——, enlarged, treated by compression, by Dr. C. Clay	5	78
Nux vomica, in the sickness of pregnant females	3	79

	VOL.	ART.
Oak-bark, injection of the decoction of, in the cure of serous cysts	8	43
Opacity, congenital, of the cornea, two cases of	3	60
———————————, by J. Walker, Esq.	1	41
——— of the cornea, iodine in the treatment of	4	73
Operations, treatment of the wounds after	1	36
Operation for the cure of stammering, by Professor Dieffenbach	3	41
Ophthalmic practice, suggestions for the improvement of, by Dr. Robert Hamilton	7	67
——— affections, on the use of nitrate of silver in	7	68
Ophthalmia, purulent, before birth, by J. Walker, Esq.	1	41
———, strumous, new mode of treating, by nitrate of silver, by Dr. Hocken	6	53
———————, treatment of, by nitrate of silver and iodine, by J. Walker, Esq.	1	45
———————————, by muriate of baryta	1	50
———, scrofulous, treatment of, by oxymuriate of mercury administered internally, by John Hamilton, Esq.	2	109
———, lotion of common salt in the treatment of, by Dr. Hays	3	67
Opium, its effects, compared with conium, by Mr. Judd	1	22
——— in the treatment of inflammation	2	18
———, process for preparing a concentrated solution of	4	17
———, poisoning by, treated by electricity, by Dr. C. J. B. Williams	4	6
——— injections in nervous excitement, by Dr. Maddock	4	23
——— in the treatment of peritonitis, by Dr. Watson	5	6
———, the smoking of, as a remedial agent	5	18
———, poisoning by, a new method of exciting vomiting in, by Dr. Buck	5	31
——— in the treatment of jaundice, by Dr. Johnson	2	5
——— in dyspeptic complaints, by Dr. Clay	6	16
——— and antimony, in nervous fever	7	2
———, poisoning by, treated by electro-magnetism	7	7
Do. Do. Do.	7	8
——— in strangulated hernia	5	87
——— in the treatment of hernia, by Dr. James Ross	7	84
Orbit, on certain structures in, and improved methods of treating its diseases, by J. M. Ferrall, Esq.	4	58
Otorrhœa, lapis divinus in the treatment of	4	72
Ovarian cyst, extraction of an, by B. Phillips, Esq.	2	122
Ovaries, on the function of, in menstruation, by Dr. R. Lee	2	128
Ovaria, diseased, on the extirpation of, by Dr. Clay	7	51
Ovarian tumours, on the diagnosis and extirpation of, by W. A. Kilgour	8	65
Ovum, mammiferous, spermatozoa observed within, by Dr. Barry	7	103
Oxalate of lime in the urine, mode of detecting diseases with which it is connected, with the symptoms and treatment, by Dr. Golding Bird	6	2
Palate, cleft, successfully operated on, by Dr. J. Cusack	7	55
Pannus, upon the cure of, by exciting inflammation by the inoculation of the matter of blenorrhœa, by Dr. A. B. Stout	8	75
Paralysis in the feet, new operations for, by James Braid, Esq.	3	47
———, of the seventh pair of nerves, a case of	4	45
———, treatment of, by cantharides, by Dr. Seymour	5	15
———————, by electro-puncture	5	25
Paralysis of the face, successfully treated by strychnia	7	14
———, treated by ergot	6	41
———, from exostosis of the spine	8	15
———, clinical remarks on, by Dr. Seymour	8	21
———, local, on the treatment of, by James Braid, Esq.	3	47
——— of the bladder cured by injections of tincture of cantharides, by M. Lisfranc	8	41
Paraplegia treated by ergot	6	41
Paraphimosis, reduction of, effected by the application of extract of belladonna, by Dr. Mignet	4	76

	VOL.	ART.
Parturition without consciousness, by T. E. Rawson, Esq.	4	110
——— without labour pains	6	86
Pelvis, contracted, an instrument for extracting the fœtus in cases of, by Dr. Campbell	5	91
Periostitis, on the treatment of, by incision, mercury, hydriodate of potash and sarsaparilla	1	56
Perforator and crotchet, on the cases proper for the use of, by Dr. Fleetwood Churchill	3	76
Percussion, explanation of, with new kind of instruments, by Dr. Williams	7	1
——— and auscultation, rectification in the practice of, by Dr. Skoda	4	1
———, on the method of practising mediate, by Dr. Bennet	5	3
Perspiration, excessive, prevention of, by tannin	3	20
Peritonitis treated by opium, by Dr. Watson	5	6
Pessaries, sponge, new kind of	8	116
Pessary, new, by C. Clay Esq.	4	98
Pharmacopeias, various, hints from	5	11
Phloridrine, a new remedy for ague	5	45
Phimosis, on the treatment and operation for, by C. A. Key, Esq.	2	107
Phlebitis, treatment of, by actual and potential cautery	8	110
Phthisis, (see consumption)		
Piperine in intermittent fevers, by Dr. Hartle	3	10
Piles, hints on the treatment of, by Bransby Cooper, Esq.	3	46
———, treatment of, by pitch	3	29
Pitch, in the treatment of piles	3	29
Placenta, on the position of, in the womb, at different stages of pregnancy, by Hugh Carmichael, Esq.	2	127
———, retained, treated by incision of the os-uteri	2	134
———, on the structure of, and connection with the uterus, by W. Bloxam, Esq.	2	135
———, retained eleven weeks	6	89
Placental tufts of Weber, on the, by Dr. Knox	2	134
Platinum, on the physiological and therapeutic action of, by Dr. Hoefer	3	33
Plaster, adhesive, made with isinglass	4	79
———, court, formulary for the preparation of	7	82
———, indian rubber,	7	83
Plesser and pless-imeter, new, by Dr. Burne	4	20
Pleurisy, chronic, attended with effusion, on the treatment of, by Dr. Hope	4	52
Plug, new, as a means of inducing premature labour	5	99
Pneumonia, infantile, treatment of, by Dr. West	7	21
———, on the treatment of, at Guy's Hospital, by Dr. Hughes	6	28
———, on the treatment of, by spirits of turpentine, by Mr. James Martin	2	83
———, on the treatment of, by Dr. Watson	4	26
Poisoning by laudanum, treated by electricity	7	8
———, by corrosive sublimate, hydrated proto-sulphuret of iron, an antidote to	7	30
———, by colchicum, case of, by Dr. A. T. Thompson	8	13
———, by arsenic, symptoms and tests of	4	114
Polypus of the uterus, expelled by means of secale cornutum, by M. P. Moyle, Esq.	4	99
——— uteri. &c., on the treatment of, by secale cornutum	4	3
Popliteal aneurism, mode of passing the ligature, by Bransby Cooper, Esq.	5	58
Portal circulation, on the design of, by Dr. R. Willis	1	111
Porrigo and Lepra, treatment of, by ointment of ioduret of sulphur, by Dr. W. Davidson	5	53
Poultices in inflammations of the great cavities, by Sir Francis Smith	3	14
Potassium, cyanide of, in acute articular rheumatism	4	88

	VOL.	ART.
Potash, carbonate of, on compounding gum resins	6	22
———, chlorate of, in cancrum oris, by Dr. Hunt	8	80
Pregnant females, existence of milk in the urine of	1	66
Pregnancy, two years after the cessation of the menses	8	115
———, gravidine, a new substance, as a sign of, by Dr. Stark	5	100
———, vomiting during, relieved by nux vomica	3	73
——— without the usual signs, and parturition without pains, by T. Lewis, Esq.	6	86
Premature labour, induced by ergot of rye, by Dr. Patterson	1	63
——— ———, induced by ergot of rye in a dwarf	2	133
———, mode of producing, by puncture of the membranes,	3	78
Procidentia uteri, treatment of, by suture of the external labia, by Dr. E. Geddings	3	77
———, use of the actual cautery in	4	105
Prolapsus ani, new operation for, by M. Robert	2	120
———, remarks on, by Bransby Cooper, Esq.	3	46
———, on a new mode of treating, by Dr. H. M'Cormac	8	102
——— uteri, new cure for, by caustic to the vagina	1	42
——— of the bladder cured by operation, by R. T. Lightfoot, Esq.	5	57
Prostate gland, enlargement of, reduced by iodine, by R. A. Stafford, Esq.	2	119
Psoriasis, on the treatment of, by the hydriodate of arsenic and mercury, by Mr. Donavan	2	82
———, treatment of, by naphthaline, by M. Emery	7	85
Ptosis, cured by operation, by T. B. Curling, Esq.	3	48
———, hereditary, case of,	4	82
Puerperal enteritis, treatment of, by acetate of lead, by Dr. W. S. Oke	8	112
——— fever, arising from the contagion of typhus, by W. E. Humble, Esq.	6	85
Pulmonary hæmorrhage, pathology of, by Dr. Graves	8	16
Purgatives in inflammation of the brain, by Dr. Watson	3	30
Puncture of the membranes, as a mode of producing premature labour	3	78
Pupil, artificial, on the formation of, by J. B. Estlin, Esq.	8	76
Pyrosis, source of the watery discharge of, by Dr. Burne	1	69
Quinine, mode of administering, to children	6	43
———, iodide and biniodide of, new preparations	8	29
———, large doses of, in the treatment of yellow fever	2	75
———, hydrocyanoferrate of, on the preparation of, a superior febrifuge to the sulphate of quinine, by Mr. Donovan	2	80
———, in the typhus of children	4	46
———, large doses of, in intermittent fever	5	26
Renal disease (see kidneys.)		
——— dropsy, on elaterium in the treatment of, by Dr. Clendenning	5	17
Rectal tube in the treatment of strangulated hernia	4	40
Recto-vaginal fistula, successfully treated by operation, by M. Petrequin	4	92
Retroversion of the uterus, new mode of reduction of by means of an inflated bladder in the vagina	1	80
Reduction of strangulated hernia	1	40
Do. Do.	2	123
Re-union of a completely divided finger	3	80
Respiration, new theory of the sounds of, by M. Beau	3	84
Reproductive function, outline of a philosophical system of, by Dr. W. B. Carpenter	4	113
Rheumatism, treated with opium, by Dr. Corrigan. With external applications of turpentine, camphorated spirit, with a little sulphur. Quinine combined with opium. Mist. guaiaci. in the chronic stage. Pot. hydriod. Dr. Wigan's treatment, by large doses of powdered colchicum.	1	4

	VOL.	ART.
Rheumatism, the migratory pains of, treated by belladonna	8	3
———, chronic, treated by sarsaparilla and hydriodate of potash, by Dr. Heygate	3	23
———, acute, treatment of, by cinchona	3	25
———, chronic, treatment of, by tincture of aconite	4	14
———, acute articular, treatment of, by large doses of nitrate of potash	4	16
Do. Do. Do.	4	30
———, on the hot and cold forms, and treatment of the latter by hydriodate of potash and guiacum, by Dr. Taylor	5	14
——— dermalgia, and muscular rheumatism	5	32
———, acute, treatment of, by Dr. Hope	6	12
———, various remedies for, by Dr. Cowan	8	3
———, acute articular, cyanide of potassium in the treatment of, by M. Malherbe	4	88
Rhubarb, burnt, a remedy for diarrhœa	3	31
Rhatany root, infusion of, in the treatment of fissures of the anus, by M. Trousseau	3	68
Rickets, proper diet in cases of, by A. W. Close, Esq.	8	52
Rupture of the uterus, accidental, with escape of the fœtus into the abdomen, by H. A. Randall, Esq.	4	106
Saffron in the treatment of chlorosis	8	46
Sanguineous tumours on the scalp, in new born children, on the varieties and treatment of, by Dr. Francis Black	3	80
Salivation produced by small doses of mercury, by Mr. Snow and Dr. Law	1	16
———, from iodine, contrasted with that from mercury, by Sir F. Smith	3	15
Sarsaparilla, remarks on, by Dr. Hancock	1	21
———, powder of, advantages of, and mode of preparing	2	91
———, in the treatment of periostitis	1	56
Saturation of acids and alkalies, the proportions for, in extemporaneous prescriptions	5	36
Savine, in the removal of venereal warts	8	111
Saw, cranial, new form of,	6	76
Scalds, burns, unguentum æruginis in the treatment of	3	70
———, a solution of gum arabic in the treatment of	6	60
Scalp of new born children, varieties and treatment of sanguineous tumours on, by Dr. Black	3	80
Scarlatina, prevention of the contagion of, by belladonna	6	9
——— maligna, chlorine in the treatment of, by Dr. Watson	6	9
Sciatica and lumbago, on the treatment of, by morphia, calomel, and antimony, by hydriodate of potash, by Dr. Graves	2	93
———, on the treatment of, by turpentine	5	10
Scrofula, on the treatment of, by muriate of barytes and iodine, by B. Phillips, Esq.	1	39
———, by sea salt, by M. Latour	1	1
———, treated by oil of the liver of cod fish, by Dr. Taufflied	1	15
———, treatment of, by decoction of walnut leaves	4	42
——— Irish moss	5	11
———, by chloride of barium	4	47
Scrofulous tubercle of the brain, a case of, by Dr. Hennis Green	3	82
———, ophthalmia, treatment of, by oxymuriate of mercury, by John Hamilton, Esq.	2	109
Scurvy, on the treatment of, by tincture of cantharides, by M. Irven	7	3
———, on the prevention of, by Dr. Baly	7	19
———, potatoes the best preventive of, by W. Dalton, Esq.	6	21
Sea-water, artificial, on the preparation of	4	49
Seminal discharges, on the causes and treatment of, by lunar caustic, by Benjamin Phillips, Esq.	7	58
———, involuntary, on the nature of, by Dr. R. H. Allnatt	8	105

	VOL.	ART.
Seclusion in the treatment of the insane, by Dr. Conolly	3	35
Serous cysts, treated by iodine injection, by M. Velpeau	5	81
—— inflammations, on the use of poultices in	3	14
Silver, nitrate of, removal of the discolourations of, by hydriodate of potash	6	1
Do. Do. Do.	7	29
——————, as an application to bed sores, by H. Jackson, Esq.	7	77
——————, in the treatment of effusion within the joints	7	87
——————, in certain ophthalmic affections	7	68
——, oxide of, further observations on, by Mr. Lane	4	19
——, iodurct of, as a substitute for the nitrate, and mode of exhibition	6	1
——, nitrate of, in the treatment of croup	6	29
——————, preservation of, by coating of shell-lac	6	72
——————, Mr. Higginbottom's method of applying, in erysipelas	8	100
——————, in white swellings, by M. Jobert	4	69
——————, in strumous ophthalmia	1	45
——————, to arrest the hæmorrhage after the extraction of teeth	3	58
——, oxide of, instead of the nitrate, in the treatment of various internal and external diseases, by Mr. Lane, (see nitrate of silver)	2	75
Skate liver oil, on	6	17
Skin, diseases of, arsenic in the treatment of	8	2
——, experiments on the functions of, by M. Ducros	4	122
——, diseases of, elm bark in the treatment of, in lepra and other scaly affections, by Dr. Sigmund	1	23
Soap in the treatment of burns, by Dr. Williamson	4	70
Soda, carbonate of, an antidote for poisoning by copper	5	39
Sodium, chloride of, (common salt) lotion of, in the treatment of ophthalmia	3	67
Sores from continued recumbency, treatment of, by nitrate of silver	7	77
Sound or bougie, physical examination of the uterus by means of the, by Dr. J. Y. Simpson	8	67
Spasm, chronic, of the muscles of the face, treated by division, by Dr. Dieffenbach	5	74
Spasmodic affections of the larynx, treatment of, by veratria	4	13
Speculum for the ear, by Gruber	4	72
Spermatozoa observed within the mammiferous ovum, by Martin Barry, Esq., M.D.	7	103
Spine, on lateral curvature of, such cases as may be remedied by operation, by James Syme, Esq.	7	66
Spleen, on the use of, by D. G. Dermott, Esq.	3	89
—— and vena portæ, ingenious theory respecting the use of, by Dr. Hargreave	6	93
Squinting, treatment of, by division of the muscles of the eye, by Professor Dieffenbach	1	44
Stammering, observations on, by Dr. Abercrombie	7	26
——————, on the treatment of	2	100
——————, new operation for the cure of, by Professor Dieffenbach, with remarks by Mr. Lucas and Mr. Yearsley	3	4
Steam bath, simple apparatus for	3	66
Stethoscope, improvements in the construction of, by Dr. Williams	7	1
——————, with a flexible tube, on the, by Dr. G. Bird	3	6
Stomach, on the structure of the mucous membrane of, by Dr. Todd	2	140
——————, affections of, treated by nitrate of silver, by Dr. Hudson	1	31
——————————————————, by Dr. Dick	5	22
——————, disorders of, treated by Dr. Debreyne, by observing the effects of different articles of food; use of opium and bismuth to relieve neuralgia of the stomach: atony of the stomach relieved by tonics. Use of animal and vegetable diet. Quinine, columba, gentian, aloes, &c. &c.	1	2
——————————————————, by Dr. R. D. Thompson	1	14

	VOL.	ART.
Stramonium, &c., in the treatment of asthma	5	
Strabismus, incipient, in hydrocephalus, best mode of detecting	8	53
———, on the varieties of	8	89
———, and operations for, by T. Elliott, Esq.	3	43
———, on the operations for	2	113
———, slight degrees of, operation for curing without division of the muscles	4	81
———, suture of the conjunctiva after division of the muscles for, a means of avoiding too great prominence of the globe of the eye	4	85
Strangulations, pseudo, importance of distinguishing from real, in cases of hernia, by M. Malgaigne	4	87
———, Do. Do.	5	58
Stricture of the urethra, by Bransby Cooper, Esq.	2	106
———, mode of dilating the urethra in, by Dr. Arnott	3	52
——— of the urethra, on the various modes of treatment of	5	48
——— of the colon, treatment of, by operation, by T. P. Teale, Esq.	5	50
——— of the urethra, on the treatment of, by Sir B. Brodie	6	45
———, Mr. Stafford's plan of treatment	6	47
——— of strangulated hernia, new knife for dividing, by Dr. T. C. Stewart	8	101
Strictures, on the treatment of, by Bransby Cooper, Esq.	1	53
Strychnine in the treatment of neuralgia, by Dr. Pidduck	2	81
Strychnia in the treatment of chorea	4	54
———, tannin an antidote to poisoning by	6	34
Sulphur, in the treatment of angina pectoris, and other spasmodic affections, by Dr. Munk	2	97
———, ioduret of, in the treatment of porrigo and lepra, by Dr. W. Davidson	5	53
———, by Dr. J. J. Ross	6	48
Sulphuretted hydrogen, spontaneous evolution of, as a cause of malaria, by Pr. Daniell, &c.	4	112
Superfœtation, apparent case of	7	91
Suspensory apparatus, in the treatment of fractures of the leg, by J. Luke Esq.	3	69
Surgery, practical, aphorisms of, by M. Dupuytren	3	74
Suture of the external labia, in cases of procidentia uteri, by Pr. E. Geddings	3	77
Sutures of caoutchouc, after operations, by T. Nunneley, Esq.	3	42
———, Do. Do.	4	63
Subcutaneous division of muscles, on the	2	124
——— incision for the removal of loose bodies in joints	3	54
——— in cases of enlarged bursa patellæ	6	67
——— for entropion	6	82
Syphilis, inoculation as a test of, by Herbert Mayo, Esq.	5	86
———, successful treatment of, by arsenic	8	106
———, treatment of, by tartarized antimony	6	49
———, on the specific nature of, and on the mercurial treatment of, by R. Carmichael, Esq.	1	58
———, general view of the modern treatment of, primary syphilitic sores, swelled testicle, venereal diseases of the eye, constitutional syphilis, &c.	2	105
Sycosis menti, treatment of, by local application of sulphate of iron	8	107
Tannin, an antidote to poisoning by strychnia	6	34
———, for the prevention of excessive perspiration, by Dr. Charvel	3	20
Tapping of the thorax, various instruments for, by J. Snow, Esq.	5	51
Taraxacum, new preparation of	6	20
———, formulæ for new preparations of	8	26·7
———, on the medicinal properties of, the proper times of collecting the plant, and best mode of preparing the extract, by Joseph Houlton, Esq.	5	2

	VOL.	ART.
Taraxacine, on the mode of preparing	5	2
Tartrate of antimony, in the treatment of hæmoptysis	4	17
Teeth, on the structure of, by A. Nasmyth, Esq.	2	138
———————, by Professor Owen	2	139
———, hæmorrhage from the extraction of, arrested by nitrate of silver	3	58
Temporal artery, on the best mode of opening and of continuing the flow of blood, by Hugh Carmichael, Esq.	5	56
Tenia, treatment of	4	11
Testicle, swelled, on the treatment of, by compression, by Langston Parker, Esq.	2	111
——————————————— by J. Dixon, Esq.	3	58
Tetanus, traumatic, succesfully treated by sub-nitrate of mercury, and other remedies	7	12
———, treatment of, by Indian hemp	3	72
———, cured by tobacco, by Mr Bullock	4	21
Thorax, on tapping of, by John Snow, Esq.	5	51
Tinea, formulæ for the treatment of, used by M. Casenave	6	41
——— capitis, on the treatment of, by strong acetic acid	8	94
———————, on the treatment of	2	92
——— favosa, Parisian mode of treatment of	8	96
———, favosa, a vegetable	4	121
Tissues, on the non-vascular, by J. Toynbee, Esq.	5	103
Tic doloreux, treatment of, by strong ammonia to the palate	8	95
Tooth, transplantation of, from a sheep into the socket of a child	6	74
Tobacco leaves in the treatment of hysteria	6	28
——— in the treatment of strangulated hernia	1	57
——————————— of tetanus	4	21
Tonsils, new instruments for the excision of	2	121
———, chronic enlargement of, treated by iodide of zinc	6	48
Torula Cerevisiæ, on the	2	137
Torsion of the arteries, new mode of performing	2	118
Tourniquet, on the use of, to restrain hæmorrhage after delivery, by W. Pretty, Esq.	4	104
Trachea, remarks upon the removal of foreign bodies from the	8	73
——— and larynx, experiments upon the sensibility of, by — Erichsen, Esq	8	73
Transfusion of blood, successful case of, by Dr. Prichard	8	54
Tracheotomy, on the efficiency of, and mode of performing	5	67
———————, Dr. Dunne's dilating canula after the operation of	6	55
———————, for the removal of foreign bodies from the bronchus	7	86
Trachea, new instrument for opening, by Mr. Milliken	6	56
Turpentine, mode of administering, for tape worm	6	19
———————, oil of, in night blindness, by C. Kidd, Esq.	8	91
———————, oil of, in the treatment of pneumonia	2	83
———————, oil of, in the treatment of neuralgia	5	10
———————, spirits of, in iritis,	1	35
———————, oil of, in the treatment of hydrophthalmia	5	64
———————, mode of administering, for tape worm	6	19
Tubercles and phthisis, on various opinions concerning, by Dr. Black	8	9
Tubercle, on the laws which regulate the deposition of, by Dr. Barlow	3	3
———————, on the nature of the secretion of, by Dr. T. H. Wallis	5	101
———————, scrofulous, of the brain, a case of, by Dr. Hennis Green	3	82
Tumours, ovarian, remarks upon the diagnosis and extirpation of, by Dr. A. Kilgour	8	68
Tumour, erectile, removal of, from the popliteal space, and description of, by R. Liston, Esq.	8	82
———————, erectile, cured by vaccination	7	79
Twins, remarkable birth of, by M. Donne	5	91
———, extraordinary case of	7	21

	VOL.	ART.
Ulcers, on the local treatment of, by W. H. O. Sankey, Esq.	7	78
——, on Baynton's method of treating, by J. Bell, Esq.	3	61
—— of the face, apparently malignant, cured by anti-syphilitic remedies, by M. Payne, Esq.	4	83
——, old, treated by corrosive sublimate and tr. of iodine, by W. Fergusson, Esq.	5	82
——, phagedenic of the septum nasi, treated by chloride of zinc	8	88
——, of the cornea, on the treatment of	2	110
Umbilical cord, advantages of retaining undivided for a short time after birth, by M. Bandilocque	4	109
Urine, treatment of incontinence of, in children	1	29
——, retention of, treated by ergot of rye, by Dr. W. Kingsley	8	103
——, on the detection of albumen in, by Dr. Rees	3	21
—— of pregnant females, mode of detecting keistein in, by H. Letherby, Esq.	5	95
——, on the prevalence of calcareous salts in, by Dr. Donne	5	98
——, gravidine in the, by Dr. Stark, &c.	6	84
——, existence of milk in, during pregnancy, by Dr. G. Bird	1	66
Urinary calculi, on the solution of, by the waters of Vichy	1	30
——, solution of, by the waters of Vichy	5	16
—— organs, on diseases of, by Sir B. Brodie	6	45
—— disorders, treatment of, by benzoic acid, by J. S. Soden, Esq.	6	57
Urethral fistulæ, mode of treatment, by M. Ricord	4	78
Urethra, new, artificial formation of, by M. Ricord	7	81
——, mode of dilating for the removal of calculi, by Dr. Hancock	1	47
——, stricture of, practical hints on the treatment of, by Bransby Cooper, Esq.	2	106
——, mode of dilating in stricture, by Dr. Arnott	3	52
——, extraction of a gold pin from	4	93
——, stricture of, various modes of treating	5	48
——, treatment of, by alum, by M. Jobert	5	85
——, spasmodic stricture of	6	45
——, stricture in the anterior part of	6	45
——, mechanical injury of	6	45
——, neuralgia of	8	118
Uterus, on the pathology, diagnosis, and treatment of incipient cancers of, by Dr. Montgomery	5	8
——, extirpation of the, by M. Rossi	6	87
——, rupture of, successfully treated, by Dr. Mitchell	7	90
——, inversion of, case of,	7	95
——, cauterization of simple ulcers of the neck of	8	37
——, recovery from rupture of	8	113
——, separation of part of the neck of, during labour, by Hugh Carmichael, Esq.	2	129
——, diseased, successful extirpation of	2	132
——, incision of the mouth of, in cases of retained placenta	2	134
——, polypus of, expelled by means of secale cornutum, by M. P. Moyle, Esq.	4	99
——, Cæsarian section of, by James Whitehead, Esq.	4	100
——, accidental rupture of, and escape of the fœtus into the abdomen, by H. R. Randall, Esq.	4	106
——, congenital absence of, by Dr. E. P. Bennett	4	108
——, on cauterization of the neck of	5	83
——, remarkable rigidity of the mouth of, by E. J. Shearman, Esq.	5	89
——, secale cornutum in the hæmorrhage consequent on, Do.	5	89
——, anteversion of, cured by position alone	5	90
——, on the nature of the contractions of, by Dr. Alison, &c.	5	92
——, gravid Cæsarian section performed on, when passed into the sac of an old inguinal hernia	5	94
Utero-placental hæmorrhage, diagnosis of, by M. Gendrin	2	131
Uteri, procidentia, actual cautery in, by Dr. Lawrie	4	105

	VOL.	ART.
Uterine hæmorrhages, tabular view of the treatment of	7	92
———————, arrested by pressure on the aorta	7	93
———————, treatment of by tannin	7	94
—— action, excitement of, by alternate warmth and cold, by C. Simpson, Esq.	7	96
——, sounds, auscultation of,	8	61
—— hæmorrhage, intermittent case of	8	114
———————, on the use of the tourniquet in, by W. Pretty, Esq.	4	104
Vaccination and small pox, by Dr. Gregory	4	21
——, remarks on	1	25
——, in the treatment of erectile tumours	7	79
Valerian, essential oil of, in the treatment of hysterical and spasmodic affections, by Mr. Gore	2	84
Variola and vaccinia, the identity of, with experiments, by Mr. Ceely, and observations by Dr. Gregory, in opposition to this view	2	85
——, on the prevention of the cicatrices of, by mercurial applications, sulphur, and gold leaf	3	19
——, on the structure of the pustule, and means of preventing the cicatrices of	4	15
——, congenital, case of	7	32
—— before birth, case of	6	32
Vaccine crusts, for vaccination in hot countries	3	22
Variolæ vaccinæ, propagation of, by crusts from the cow, by Dr. Baron	4	7
Varix, on various methods of treatment of	5	65
Vagina, on adhesions and stricture of, in parturient females, by Dr. Doherty	5	88
Varicose veins, treatment of, by a needle and ligature	1	52
———————, by M. Bonnet	2	116
———————, by general pressure, by T. P. Teale, Esq.	2	116
Vascular organization, depending on physical causes	1	56
Vapour baths, economical apparatus for, by Dr. Lynch	8	8
Varicocele, mode of radical cure of	7	74
——————, radical cure of, by Dr. Lehmann	3	65
——————, on the mode of treating by, M. Velpeau	5	66
——————, in the treatment of facial neuralgia	8	47
Vesico-vaginal fistula, palliative mode of treatment by the Indian rubber bottle, by Dr. James Reid	7	64
——————— fistula, cured by actual cautery	5	52
———————, on the treatment of, by M. Lallemand	8	69
Veratria, in spasmodic affections of the larynx	4	13
Vessels in granulations, on the, by R. Liston, Esq.	3	86
Vectis, made of whalebone	4	104
Venereal warts, removal of, by savine or lunar caustic	8	111
Vichy, the waters of, for the solution of urinary calculi	7	16
Vision, on the influence of artificial light in the impairment of, by Dr. James Hunter	3	83
Vomiting arrested by creasote	6	18
——————, during pregnancy relieved by nux-vomica	3	79
Volvulus, treatment of. by large injections	8	32
Vulva, inflammation of the mucous follicles of, treatment of	5	89
Warts, venereal, removal of, by savine, or lunar caustic	8	111
Warm water injections, in the treatment of colica pictonum, by Dr. John Wilson	4	24
Walnut leaves, decoction of, in the treatment of scrofula	4	42
Water, Harrogate, artificial preparation of	5	41
——, on the application of, externally, by irrigation, by Dr. James Macartney	4	67
Waters, medicated, on the extemporaneous preparation of	5	44
White swelling of the joints, on the treatment of, by M. Lisfranc	7	72

	VOL.	ART.
White swellings, on the employment of nitrate of silver in, by M. Velpeau	4	69
Wounds after operations, hints on the treatment of, by M. Phillips	1	37
——— in dissecting and *post mortem* examinations, the mode of treating, by Herbert Mayo, Esq.	5	71
Yeast, on the fungus of, torula cerevisiæ	2	137
Yellow bark, cold water recommended in preparing the infusion of, by Mr. R. Battley	8	10
Zinc, sulphate of, in the treatment of epilepsy	3	1
———————, in flatulent affections of the colon, and in constipation, by Dr. Strong	6	8
——, sulphate of, injections of, in gonorrhœa	1	46
——, chlorate of, in the treatment of cancerous affections	1	48
——, chloride of, in necrosis	2	126
———————, injections of, in the treatment of gonorrhœa, by M. Gaudriot	3	64
———————, in phagedenic ulcer of the septum nasi	8	88
——, iodide of, in chronic enlargement of the tonsils	6	48

[HOLLAND AND KEMPLAY, PRINTERS, INTELLIGENCER OFFICE, LEEDS.]